

2015 RATE DESIGN APPLICATION (RDA)

ELECTRIC TARIFF - TERMS AND CONDITIONS,
RESIDENTIAL INCLINING BLOCK (RIB)
AND OTHER POTENTIAL RESIDENTIAL RATE
ISSUES



FOR GENERATIONS

June 25, 2014

AGENDA

Approximate Time	Item	Presenter(s)
9:00 - 9:10	Welcome	Anne Wilson
9:10 - 10:15	Electric Tariff (Distribution) Terms and Conditions	Jane Christensen Daren Sanders
10:20 - 10:30	Break	
10:30 - 12:00	RIB Rate Design	Rob Gorter Paulus Mau
12:00 - 1:00	Lunch	
1:00 - 2:30	RIB Rate Design – continued Other potential Rate Issues	Rob Gorter Paulus Mau

2015 RDA

ELECTRIC TARIFF - TERMS AND CONDITIONS



FOR GENERATIONS

June 25, 2014

Electric Tariff (Distribution) Overview:

- Terms and Conditions
 - Residential Service
 - Small, Medium and Large General Service
 - Irrigation Service
 - Street Lighting Service
- Rate Schedules (including rates for service at Transmission voltage)

Electric Tariff Terms and Conditions:

- **Distribution Extension (Electric Tariff, Section 8):**
 - Introduced at May 8 workshop; will be the subject of future workshops
- **Standard Charges Update (Electric Tariff, Sections 6 and 11):**
 - Not updated since 2007 RDA
 - Late payment charge, collection charge, reconnection charge
 - Connection charges and extension provisions
- **Definitions and Terms and Conditions Updates:**
 - Flows from Distribution Extension and other rate design work

Tariff Supplements:

- Special contracts or agreements approved by the British Columbia Utilities Commission
- Review ~ 75 supplements in place, to among other things determine which tariff supplements are closed

Standard Charges

- Update Standard Charges to reflect BC Hydro's current costs
- Standard Charges are broken out into three areas:
 1. Minimum Connection Charges
 - Single phase secondary service new connection and meter charges
(e.g. 100 amp service, overhead or underground)
 2. Minimum Reconnection Charges
 - Costs for disconnecting and reconnecting a service
 3. Miscellaneous Charges
 - Customer charges such as late payment charge, returned cheque charge, account charge

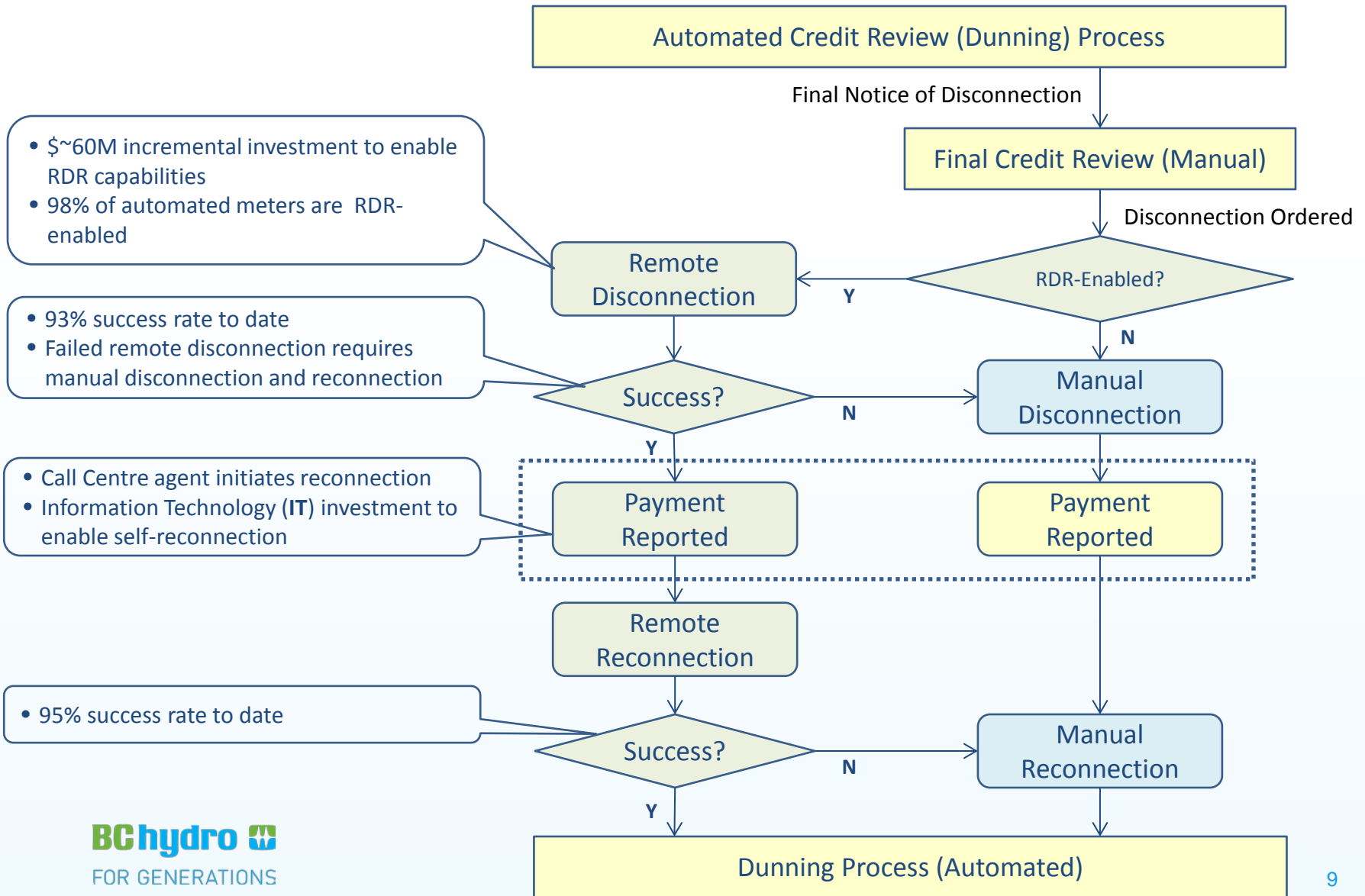
2007 RDA – Standard Charges – Minimum Reconnection Charges

Reconnection Type	Regular Hours	Overtime	Callout	
Annual volume based on fees charged to customers	88%	11%	1%	100%
Weighting to reflect higher costs for overtime and call out		1.2	2.7	
% of cost adjusted for overtime/call out weighting	84.1%	13.2%	2.7%	100%
F2006 disconnection volumes allocated by type	15,515	1,939	176	17,630
ABSU disconnection charges plus Field Services costs for reconnection	\$1,946,606	\$305,532	\$62,495	\$2,314,633
Standard reconnection charge requirements (annual \$/volumes)	\$125.47	\$157.57	\$355.09	
Current minimum reconnection charge	\$125	\$158	\$355	

Standard Charges – Minimum Reconnection Charges

- Changes in circumstances and cost structure:
 - Remote disconnection/reconnection (**RDR**) functionality introduced with smart meters
 - Switch activated in certain meter types
 - ‘Over the air’ RDR functionality phased in starting in March 2013
 - Allows for connection-related activities to be completed remotely, safely and securely
- Updates to the minimum reconnection charges should reflect the use of the remote switch

Standard Charges – Minimum Reconnection Charges



Standard Charges – Minimum Reconnection Charges

- BC Hydro is seeking feedback on what costs should be allocated to the Reconnection Charge
- The following is an illustrative example of cost categories, and is not BC Hydro’s proposal

Illustrative Example

Process Step	Unit Cost per Reconnection			
	Scenario 1. Full Costing	Scenario 2. 50% IT Disconnect	Scenario 3. 100% IT Reconnect	Scenario 4. No IT
Initiate Disconnection				
Agent costs	\$6	\$6		\$6
Disconnect Customer				
RDR Metering and IT	90	45		
Manual disconnection	8	8		8
Report a Payment / Initiate Reconnection				
Agent costs	3	3	3	3
IT investment in self-service reconnections	6	6	6	6
Reconnect Customer				
RDR Metering and IT	90	90	90	
Manual reconnection	10	10	10	10
Fee per Non-pay Disconnect / Reconnect	\$213	\$168	\$109	\$33
Total Costs Recovered	\$3.9M	\$3.1M	\$2.0M	\$0.6M

- Scenario 1. All costs (labour and IT) for disconnection and reconnection are allocated to the reconnection fee.
 Scenario 2. 50% of RDR IT costs for the disconnection are allocated to the reconnection fee.
 Scenario 3. No disconnection costs included; IT costs for reconnection are allocated to the reconnection fee.
 Scenario 4. IT excluded; costs reflect labour and vehicles for disconnection and reconnection.

Note: Manual reconnection costs assume reconnections during normal working hours.

Standard Charges – Miscellaneous Charges

Late Payment Charge	1.5% per month (equivalent 19.6% per annum compounded monthly)
Returned Cheque Charge or Pre-Authorized Payment Charge	Equivalent to BC Hydro's lead bank's NSF cheque charge in effect on 1 April of each year
Account Charge	\$12.40
Transformer Rental Charge	17% per annum of replacement value to be billed monthly
Collection Charge	\$39.00
DataPlus Service – CLOSED	\$360.00 per year per Collective Master Account. This option is only available to existing DataPlus customers.
Service Connection Call-Back Charge – Zone I	\$194.00
Net Metering Site Acceptance Verification Fee (Generators above 5 kW)	BC Hydro's actual costs, to a maximum of \$600.00

Standard Charges – New Charges?

Account Charge:

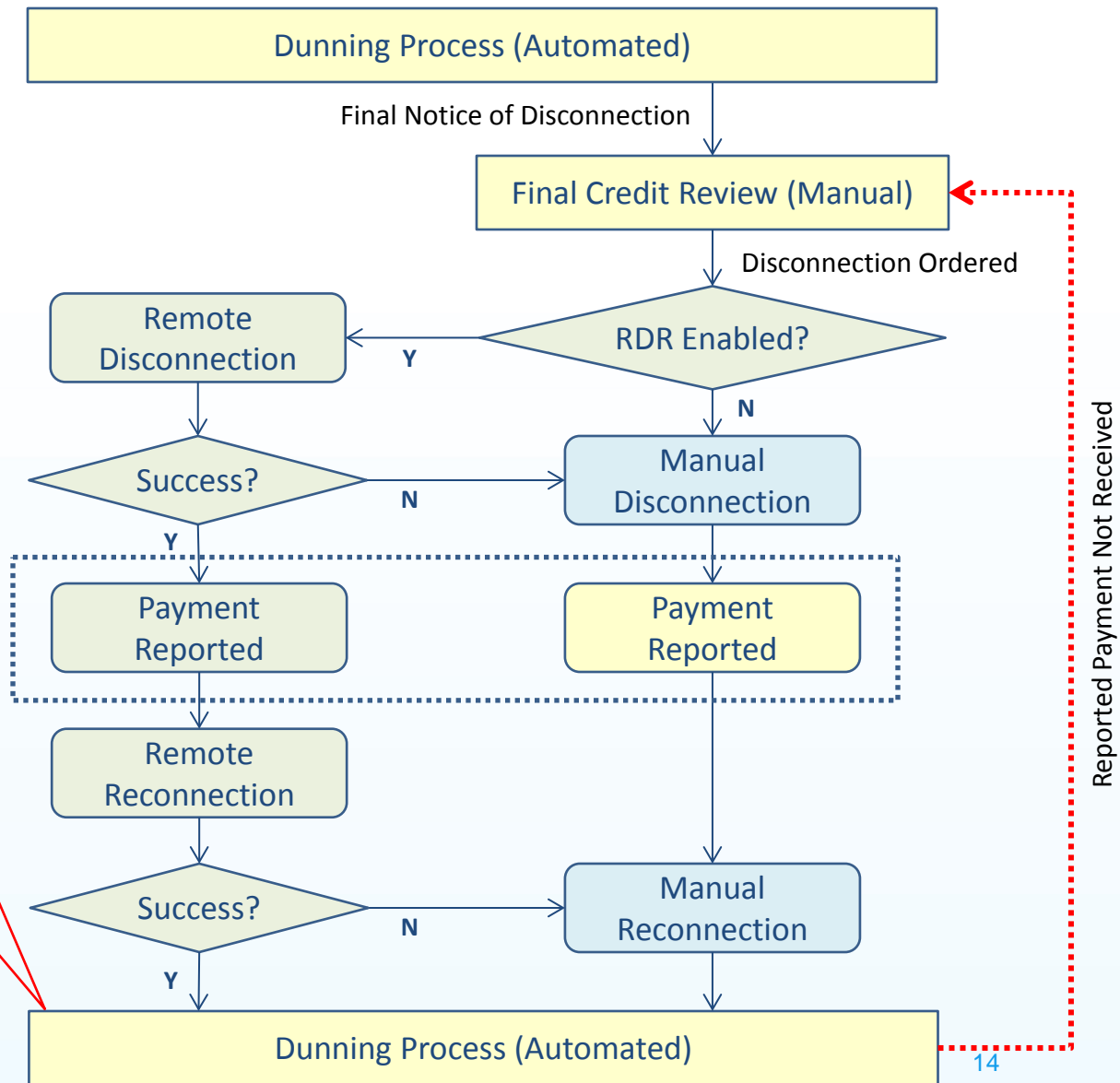
- Consideration of a different account charge for set-up of new customers than for moves of existing customers
 - Validation of identity is an additional step performed only for new customers
- Consideration of offering a discount when an account move is done through the on-line channel
 - Reduction in calls to the Contact Centre reduces costs accordingly

Standard Charges – New Charges?

Non-Payment Report Charge:

- Collection charge becoming obsolete with Field Representatives seldom collecting payment information at a customer premises and with the introduction of remote disconnection/reconnection
- Charge recovers costs associated with a customer avoiding a disconnection
- Consideration of amending the charge to apply when a customer reports a payment to avoid disconnection and payment is not received

New Charge – Non-Payment Report Charge?



- 4% of reported payments are not received
- Non-payment results in Disconnection Order and repeat of process

Standard Charges – New Charges?

Credit Card Charge:

- BC Hydro discontinued credit card payments in 2010
- Replaced payment channel with use of third party credit card service provider
- Consideration of BC Hydro accepting credit card payments directly and passing fees onto customers that use this payment channel
- Fee would be included as a Miscellaneous Charge in the Standard Charges section of the Electric Tariff

2015 RDA

RESIDENTIAL INCLINING BLOCK (RIB)
AND OTHER POTENTIAL RESIDENTIAL RATE ISSUES



FOR GENERATIONS

June 25, 2014

OUTLINE

Part 1: RIB Rate Design

1. British Columbia Utilities Commission (**BCUC**) and Stakeholder Topic-Specific Feedback on Workshop No.1: RDA Scope
2. Bonbright Criteria for Residential Rates Evaluation
3. Residential Customer Consumption Profiles and Statistics
4. Key Modelling Assumptions and Definitions
5. Alternative Designs to the RIB
 - Three Step Rate
 - Seasonal Rate
 - Customer Specific Baseline Rate
 - Flat Rate
6. Alternative Means of Delivering the RIB
 - Step 2 Pricing
 - Thresholds
 - Basic and Minimum Charge

Part 2: Other Potential Rate Issues

7. Long Run Marginal Cost (**LRMC**) for RIB ratemaking – Capacity Value
8. Voluntary Time of Use (**TOU**) Rates for Residential Customers
9. Lifeline Rates

FEEDBACK AND RESPONSE ON WORKSHOP NO. 1

Participant	Issue or Question	BC Hydro Response
BCUC BCSEA	1. Are <u>Voluntary Time of Use Rates</u> in scope?	Discussion to follow in Part 2.
BCUC BCSEA BCPSO	2. Is the 10% <u>Bill Impact Threshold</u> still appropriate? 3. Is there room to accommodate the impact of rate design?	The bill impact threshold supports rate modeling and is not necessarily determinative of any specific design nor a constraint in assessing trade-offs between designs.
BCUC BCSEA BCPSO CLEAResult	4. What is the purpose of <u>Basic Charges and Minimum Charges</u> ? 5. How would changes to Basic and Minimum charges impact efficiency and conservation? 6. Consider both increases and decreases to Basic Charges, and no Basic or Minimum Charges.	Discussion to follow. In response to stakeholder feedback, BC Hydro modeled 0% and 100% fixed cost recovery, and additional scenarios.
BCUC BCSEA	7. Narrow and “put-away” the issue of the <u>RIB Rate Threshold</u> . 8. Model very small to very large thresholds.	Discussion to follow. BC Hydro modeled a lower threshold reflecting 85% of median consumption, but very low or very high thresholds have not been modeled beyond what was proposed in Workshop No. 1.

FEEDBACK AND RESPONSE ON WORKSHOP NO. 1 – CONTINUED

Participant	Issue or Question	BC Hydro Response
BCSEA	9. Model a range of Step 2 levels not bound by <u>LRMC</u> .	The RIB Step 2 rate currently exceeds the LRMC. BC Hydro's position, based on four prior BCUC decisions, is that LRMC continues to be the appropriate referent to a Step-2 rate.
BCPSO	10. What is meant by " <u>beyond customer meter</u> "?	The meaning is: On the customer side of the meter, reflecting personal consumption decisions, such as end-use; or "behind customer meter".
BCPSO	11. Reiterate why " <u>Lifeline</u> " rates are not in scope.	Discussion to follow in Part 2.
BCSEA	12. BCSEA agrees with the principle that BC Hydro avoid rate designs where it would need to know what happens behind the customer meter, except in the case of <u>Electric Vehicle (EV) Rates</u>	BC Hydro is prepared to meet with BCSEA on this issue but notes that EV load is not material in the first 10 years of the 2013 load forecast (F2022: 125 GWh; F2028: 590 GWh)(May 2014 Load Forecast Update).
AMPC	13. Revisit <u>Bonbright criteria</u>	BC Hydro proposes to use the eight Bonbright criteria set out in the 1961 text (to be supplemented with 1988 text). BC Hydro grouped the criteria after reviewing other jurisdictions' use of the Bonbright criteria (Efficiency, Fairness, Practicality and Stability). The proposed measures are BC Hydro's for evaluation of residential rate structures including inclining block rates. BC Hydro continues to seek feedback on this topic.

BONBRIGHT CRITERIA & MEASURES FOR RESIDENTIAL RATE EVALUATION

Criteria	Elements	Measures
Economic Efficiency Price signals that encourage efficient use and discourage inefficient use (1)	Efficient pricing	LRMC (Energy) reference
		Energy Conservation (Total GWh)
Fairness Fair apportionment of costs among customers (2); Avoid undue discrimination (3)	Cost causation	Cost causation, including cost recovery through fixed versus variable charges
	Bill impacts	Maximum and customer bill impact % by customer segment
Practicality Customer understanding and acceptance, practical and cost effective to implement (4); Freedom from controversies as to proper interpretation (5)	Design complexity	Customer acceptance and understanding, including bill impacts
	Administration complexity	BC Hydro and expert opinion
	Implementation and Sustaining costs	One-time & sustaining (\$ if possible, qualitative ranking otherwise)
Stability Recovery of the revenue requirement (6); revenue stability (7); rate stability (8)	Revenue recovery	Forecast revenue neutrality
	Rate stability	Design, pricing & transition certainty, and flexibility to changes in rates, load, LRMC, etc.
	Historical continuity	Degree of rate structure changes relative to status quo

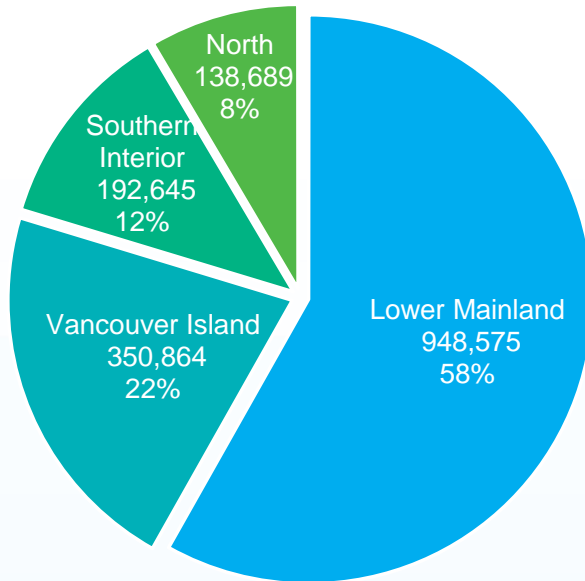
OVERVIEW OF RESIDENTIAL CUSTOMER CHARACTERISTICS

Account and Consumption Distributions Based on Residential End Use Survey (**REUS**):

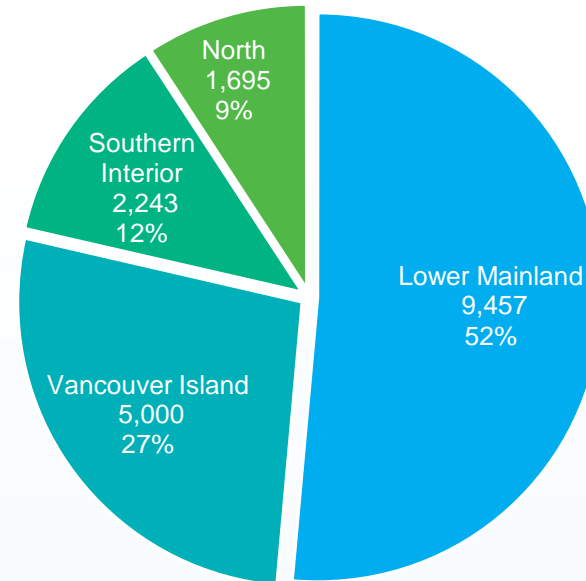
- Region
- Dwelling Type
- Electric Space Heating
- Household Size
- Low Income

UNDERSTANDING RESIDENTIAL ACCOUNTS – REGION

Customer Accounts



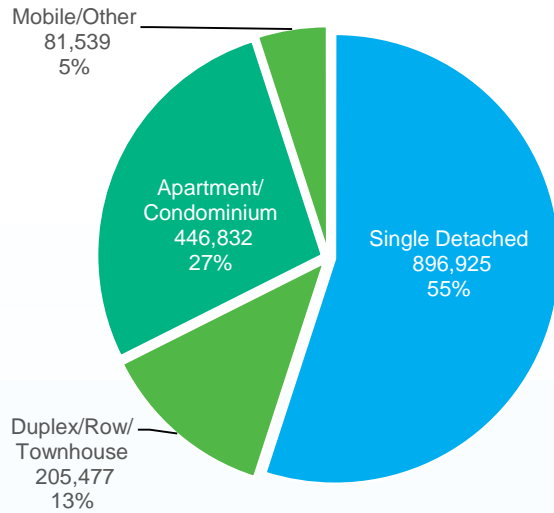
Share of Consumption, GWh



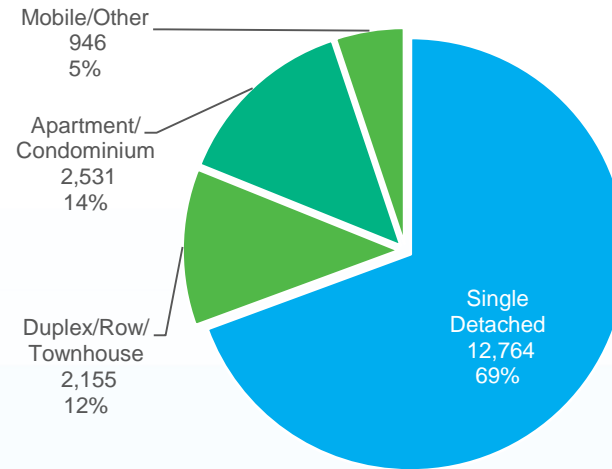
- Lower Mainland: Has a higher proportion of accounts but lower proportion of consumption
- Vancouver Island: Lower proportion of accounts but higher proportion of consumption
 - Possible reasons: Electric heat on Vancouver Island; Smaller homes in Vancouver
- Source: F2012 REUS

UNDERSTANDING RESIDENTIAL ACCOUNTS – DWELLING TYPE

Proportion of Customers



Share of Consumption (GWh)

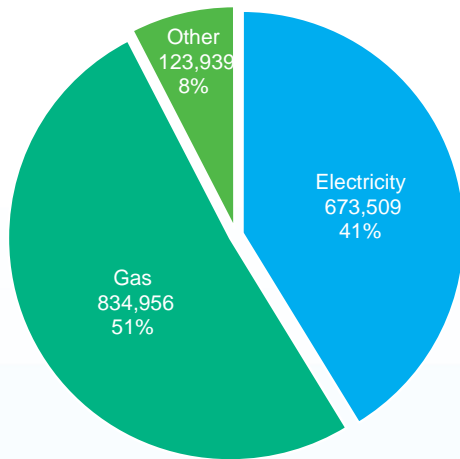


	Single Detached		Apartment		BC Hydro Service Area	
	kWh	F16 Est. Bill	kWh	F16 Est. Bill	kWh	F16 Est. Bill
Median Consumption	10,928	\$1,100	4,021	\$404	8,514	\$820

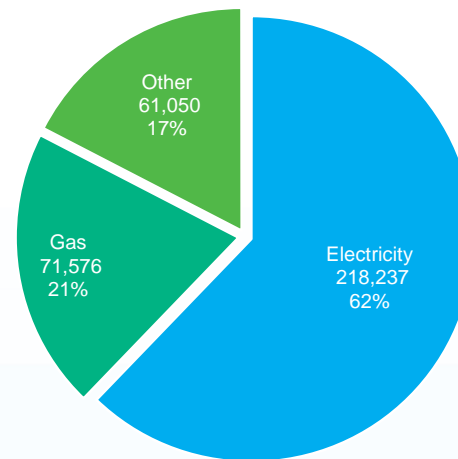
- Most accounts reside in Apartments and Single Detached Homes
- Dwelling type is a key driver of consumption
- Source: F2012 REUS

UNDERSTANDING RESIDENTIAL ACCOUNTS – ELECTRIC SPACE HEATING

All accounts in BC Hydro service area



Vancouver Island

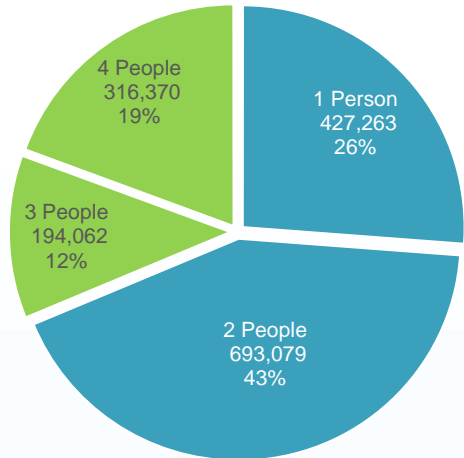


Usage	Electric Heating		(Non Elec. Heating)		BC Hydro Service Area	
	kWh	F16 Est. Bill	kWh	F16 Est. Bill	kWh	F16 Est. Bill
Median	10,026	\$1,012	7,989	\$752	8,514	\$820

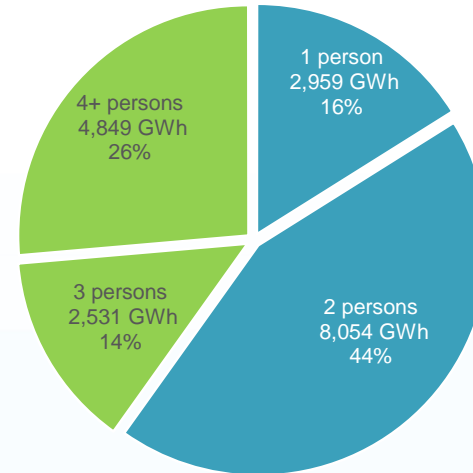
- About 41% of the homes are heated by Electricity in BC Hydro service area, 62% in Vancouver Island
- Source: F2012 REUS

UNDERSTANDING RESIDENTIAL ACCOUNTS – HOUSEHOLD SIZE

Accounts by household size



Consumption by household size

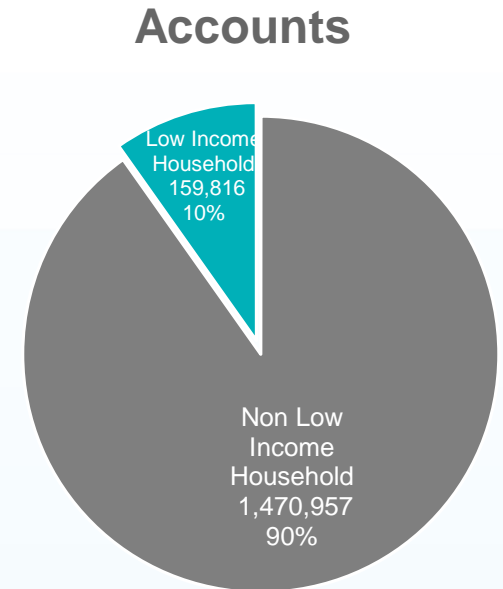
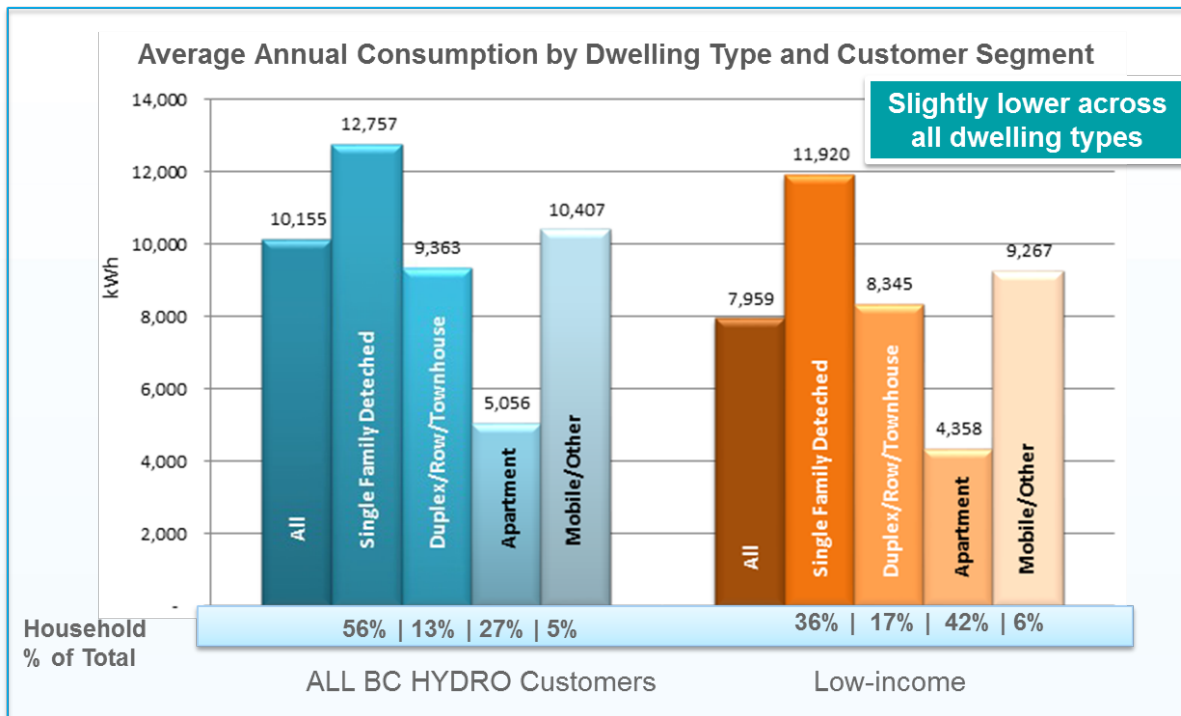


- Households with less than 3 people makes up 69% of accounts and consume 60% of the energy
- Larger households a bit more efficient on a per-person basis.
E.g. 4-people household: 3800 kWh/person/year
1-person household: 6900 kWh/person/year

- Source: F2012 REUS

UNDERSTANDING RESIDENTIAL ACCOUNTS – LOW INCOME (SELF-IDENTIFIED)

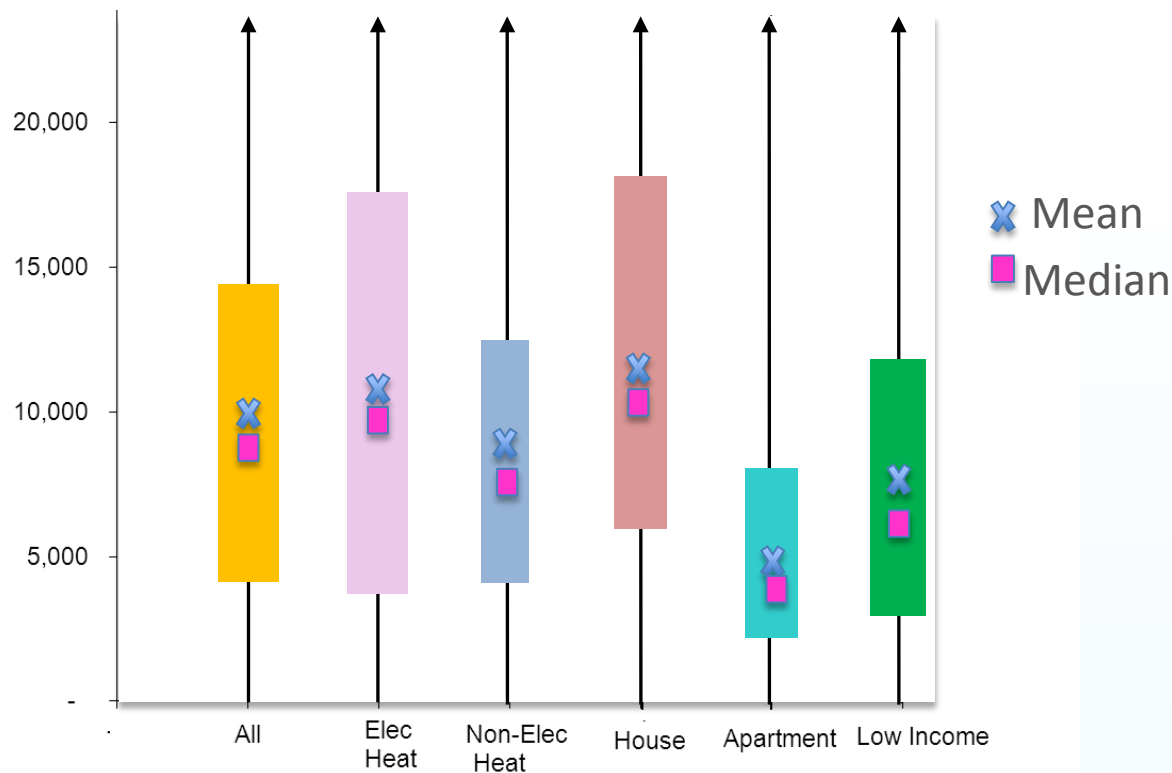
- Almost 10% of Residential accounts are low income households
- Low income accounts amount to 7% of total consumption
- On average, low income accounts have lower consumption than the average accounts



- Source: F2012 REUS

UNDERSTANDING OUR CUSTOMERS – DISTRIBUTION OF CUSTOMERS BY SEGMENT

kWh/year

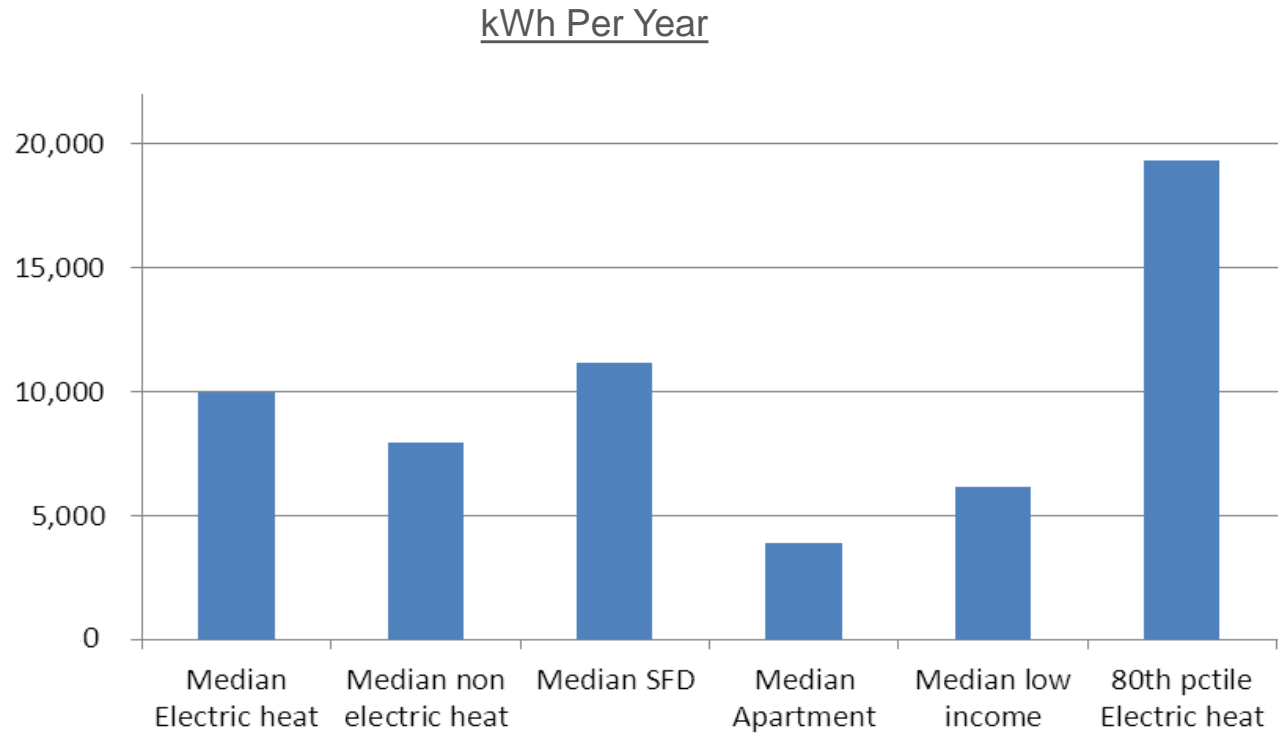


Observations

- Some variance in typical customer consumption between segments (e.g. Apartment)
- Electric heat customers range the widest
- Electric heat median is not that different than BC Hydro service area distribution
- Low income consumption is not distinctive – it's about the same as non-electric heat

- Middle 60% of customers in each segment are represented by the colour bars
- For discussion purposes, the middle 60% is defined as the “Typical” customer group within each segment

CUSTOMERS USED TO ILLUSTRATE IMPACTS ON SEGMENTS



Season Assumptions for Modelling

Winter = Oct to Feb
(5 Months)

Summer = Mar – Sep
(7 Months)

Segment	Median kWh	F16 Est Bill	Consumption Profile	
All Customers	8,513	\$819	49%W	51%S
Electric Heat	10,025	\$1,013	54%W	46%S
Apartments	4,021	\$404	49%W	51%S
Low Income (Self ID)	6,012	\$571	48%W	52%S

KEY MODELLING ASSUMPTIONS

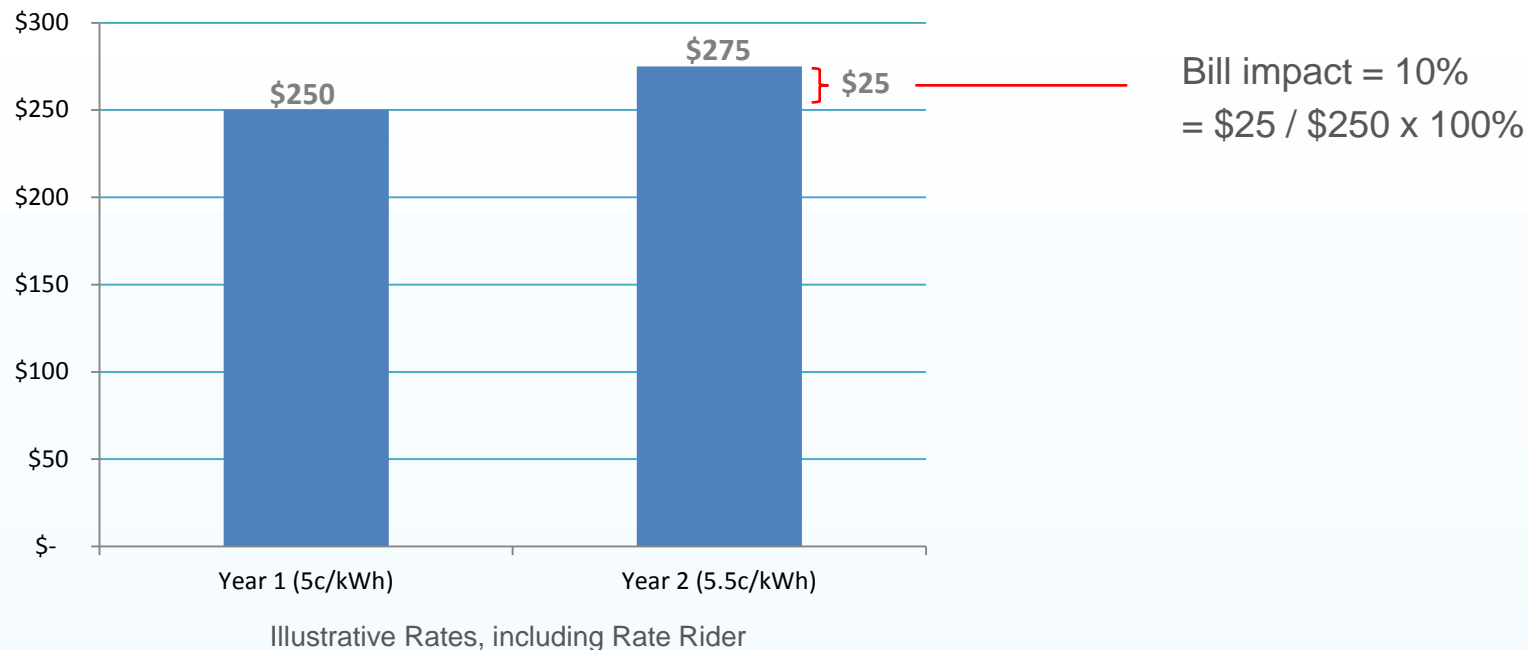
Element	Assumption
Fiscal Year Modeled	F2016 (One year only)
Billing Data Used	F2013 Customer Billing Data
Representative Sample	10,000 customers used where abstraction is needed
Precision Sample vs. Population	<p>Where the representative sample is used to compute rates (Threshold and 3-Tier alternatives), the precision of the residually calculated step is about <u>0.20 cents/kWh</u> due to slight load shape differences between the sample and the population.</p> <p>That is the equivalent of about \$2.00/year for the median BC Hydro Customer, vis-a-vis Status Quo (SQ) rate and F16 target revenue.</p>
Maximum Bill Impact	<p>10% - Bill impact constraint not possible under a number of models</p> <p>(For F2016: Revenue Requirements (RR), Deferral Accounts Rate Rider (DARR), rate changes due to rate design)</p>
Revenue Neutrality	Rates from new models are revenue neutral to SQ target revenue on forecasted load and a RR of 6%
LRMC	<p>11.01c/kWh \$F2016; Excluding Capacity and Including Distribution (D) Loss (6%)</p> <p>Equivalent to 10c/kWh + D loss in \$F13</p> $= 10c/kWh \times (1 + D \text{ Loss}) \times (1 + F14 \text{ Inf.}) \times (1 + F15 \text{ Inf.}) \times (1 + F16 \text{ Inf.})$ $= 10c/kwh \times (1 + 6\%) \times (1 + 0.2\%) \times (1 + 1.6\%) \times (1 + 2.0\%)$

BILL IMPACT ILLUSTRATION

“Bill impact”

- Computed as the % change in a customer’s bill one year to the next, assuming no change in consumption.

Annual bill at 5000 kWh/year, for years 1 and 2:



ALTERNATIVE DESIGNS TO THE RIB

Raised as alternatives in the 2008 RIB Application proceeding:

- Three Step Rate
- Seasonal Rate
- Customer Specific Baseline Rate
- Flat Rate

Evaluation:

- Jurisdictional assessment
- Modelling of rates, bill impacts and conservation (where possible)
- Evaluation against Bonbright criteria set out in Slide No. 5

THREE STEP RATE

Context: 2008 RIB Proceeding

- Suggested as a means to mitigate bill impacts, improve efficiency or target very large consumption
- BC Hydro rejected due to added complexity with little difference in terms of impacts

Jurisdictional Snapshot

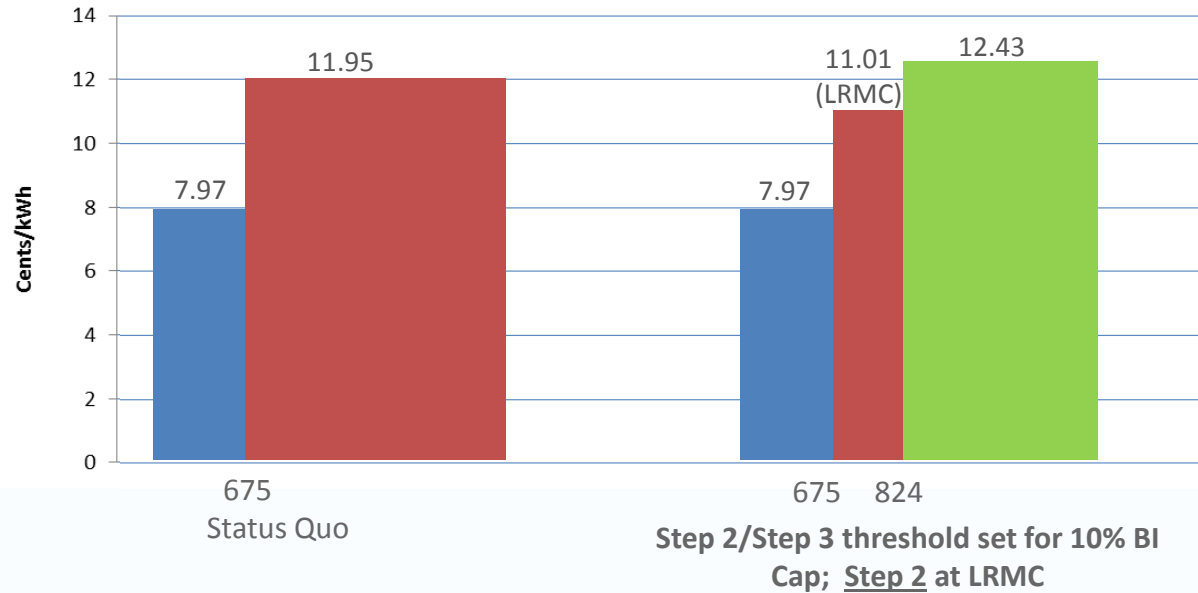
- 7 Canadian utilities with residential inclining block rates; 6 with two tiers, 1 with three
- 32 U.S. utilities with residential inclining block rates; 26 with two tiers, 6 with three or more (three utilities in California have 3 or more tiers)
- Pacific Gas & Electric Company applying to further reduce the number of tiers from 4 to 2

THREE STEP RATE

Modelling Approach

- Step 1 / Step 2 threshold = 675 kWh/month (Same as SQ)
- Step 2 / Step 3 threshold = 824 kWh/month for 10% Bill Impact
- Step 1 Rate = SQ
- Step 2 Rate = LRMC
- Step 3 Rate = Residually Calculated

THREE STEP RATE



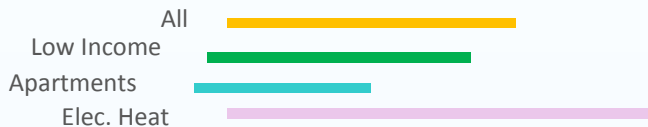
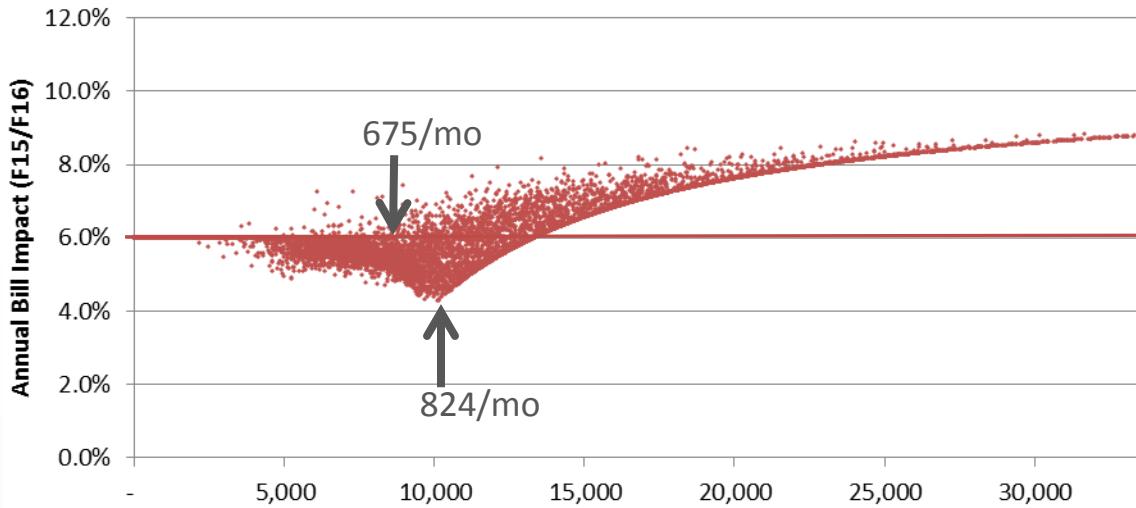
Change from F15	F15 Rates Reference	Status Quo	Three Step Rate
Step 1 Rate	7.52	6%	6%
Step 2 Rate	11.27	6%	-2%
Step 3 Rate			10.3%
Basic Charge (\$0.1764/day)	\$ 0.1664/day	6%	6%
Inc. Conservation GWh, F15 to F16. (vs SQ)			+13 from SQ

Observation:

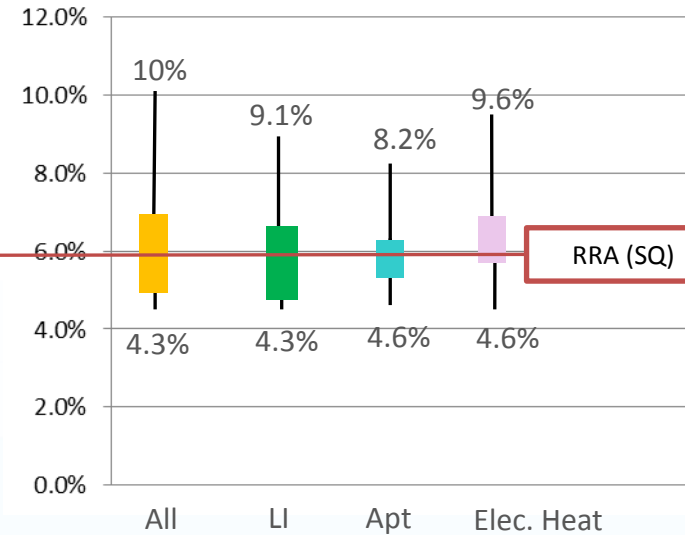
- Negligible change in conservation

THREE STEP RATE – BILL IMPACT DISTRIBUTIONS

Bill Impact Distribution vs kWh Annual Consumption



Annual Consumption Range for the middle 60% of each customer segment



Bill Impact of customer segment
Color Bar: Middle 60%

Customer Segments	Proportion Better off than SQ *	Median Bill of Segment	Median Bill Difference from SQ
All Customers	11%	\$813	(\$6)
Low Income	9%	\$571	\$0
Apartment	3%	\$404	\$0
Electric Heat	5%	\$1,010	(\$2)

* "Better off" = at least 1% lower than SQ bill

Observation

- Average consuming consumers can see slightly higher or lower bill impacts
- High consumers see higher bill impacts up to a maximum of 10%

THREE STEP RATE

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> Negligible change in conservation
Fairness	<ul style="list-style-type: none"> Highest impacts to larger consumers
Practicality	<ul style="list-style-type: none"> Decrease in customer understanding Increase in administration complexity
Stability	<ul style="list-style-type: none"> May increase revenue uncertainty Increase in rate setting uncertainty

A. Should BC Hydro continue to consider a Three Step Rate and if so, what additional analysis do stakeholders recommend (with reasons)?

SEASONAL RATE

Context: 2008 RIB Proceeding

- Consider seasonal thresholds to moderate bill impacts for space heating customers
- BC Hydro rejected due to complex design and implementation; lack of a strong cost basis

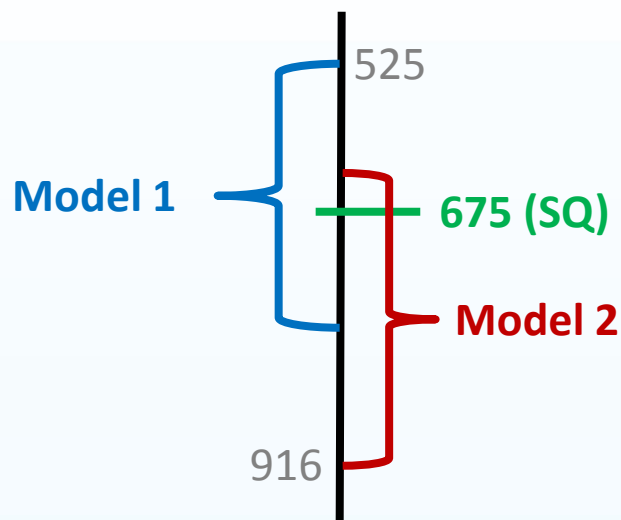
Jurisdictional Snapshot

- 37 North American utilities with seasonal rates (2 in Canada); actual rates vary by season
- All utilities surveyed charge a higher rate in the season that matches their peaking characteristics

SEASONAL RATE

Modelling Approach

- The SQ threshold (675 kwh/mo.) is replaced by a winter and a summer Step 1 / Step 2 threshold
- A higher winter threshold can potentially reduce bill impacts to electric heating customers.



- **Model 1 – based on ~85% of median in Summer and Winter**

Non-Winter Threshold	525 kWh	(Mar to Sep)
Winter Threshold	790 kWh	(Oct to Feb)
- **Model 2, based on medians of winter and summer**

Non-Winter Threshold	648 kWh	(Mar to Sep)
Winter Threshold	916 kWh	(Oct to Feb)
- **Constraints**
 - Hold Step 2 at SQ Rate
 - Step 1 rate is residually calculated
 - No 10% bill impact constraint

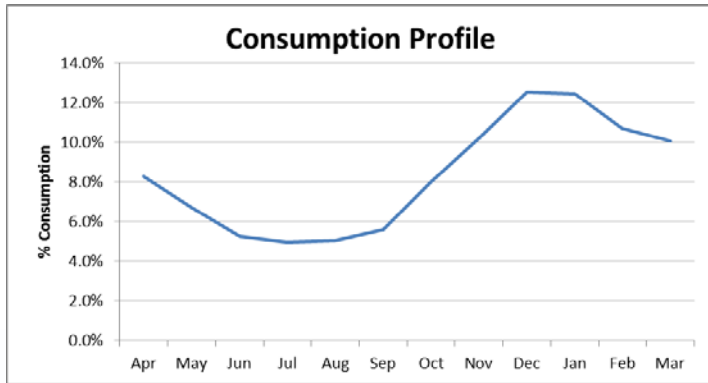
SEASONAL RATE – RELATIVE RATE OUTCOMES

	Threshold kWh/mo.	Step 1	Step 2
RIB (SQ)	675 year round	7.97	11.95
85% Median	525 S / 790 W	7.73	11.95
Median	648 S / 916 W	8.23	11.95

Observation

- Bill Impacts are driven by consumption AND a customer's load shape, as shown on the following slides

SEASONAL RATE – ELECTRIC HEAT CUSTOMER

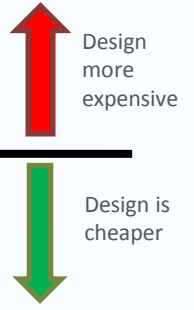
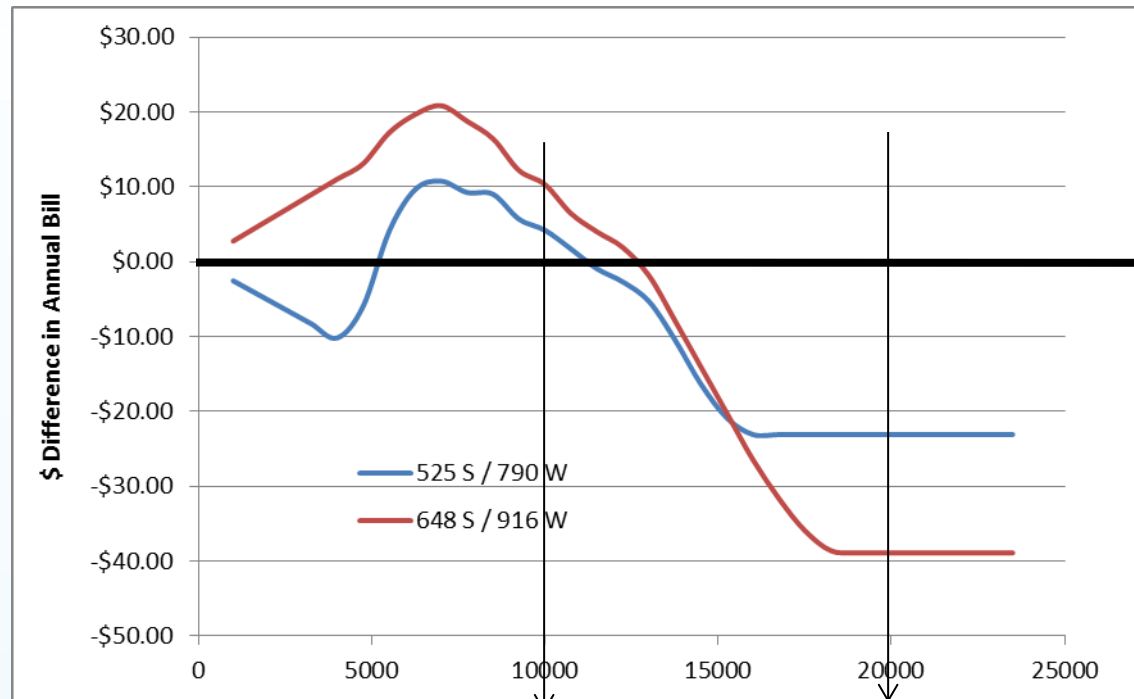


	Threshold	Step 1	Step 2
RIB (SQ)	675 year round	7.97	11.95
85% Median	525 S / 790 W	7.73	11.95
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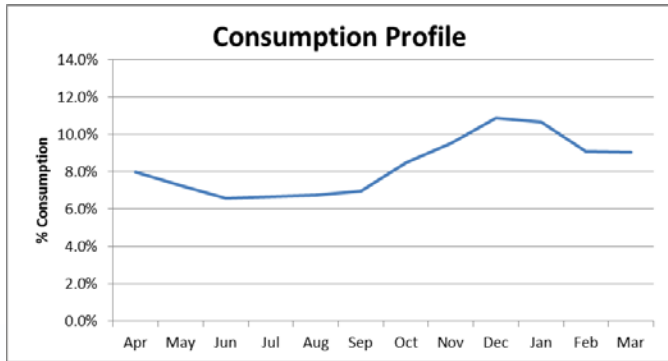
Observations:

A. Median Electric Heat with SQ bill of \$1022: **\$4 - \$10/year more**

B. Electric Heat, Single Family Dwelling, high consumer with SQ Bill of \$2260; **\$23 - \$39/year less**



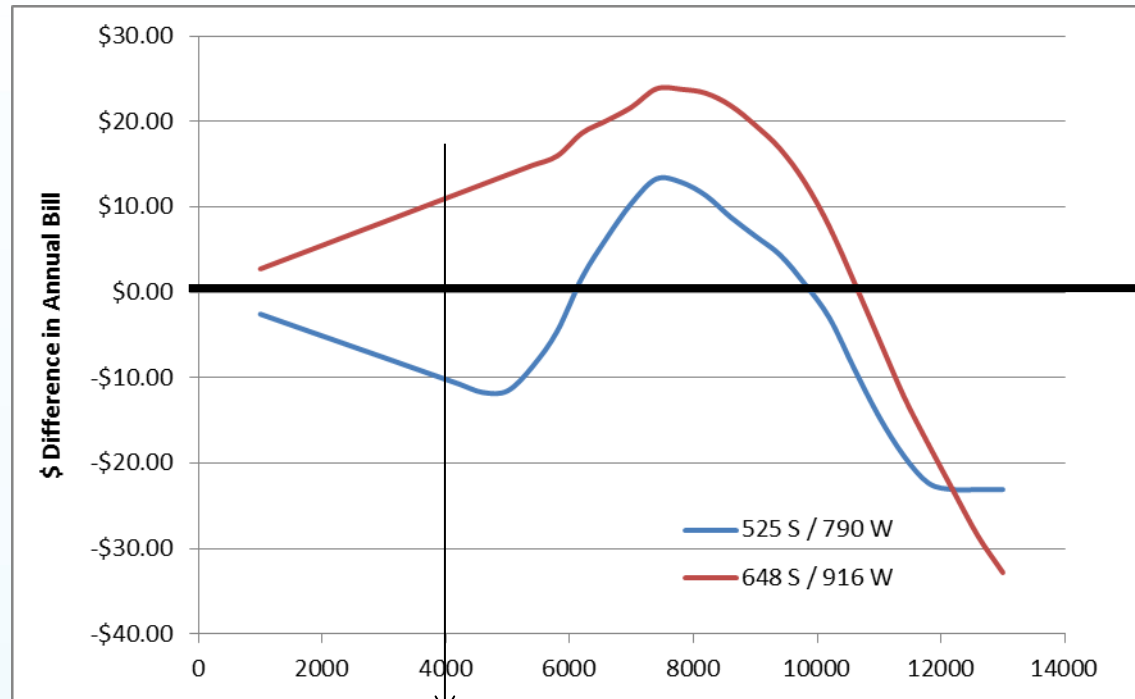
SEASONAL RATE – APARTMENT CUSTOMER



	Threshold	Step 1	Step 2
RIB (SQ)	675 year round	7.97	11.95
85% Median	525 S / 790 W	7.73	11.95
Median	648 S / 916 W	8.23	11.95

Observation:

A. Median Apartment with SQ Bill of \$408
\$10/year less -
\$10/year more



↑ Design more expensive
 ↓ Design is cheaper

SEASONAL RATE

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> • Step 2 rate = SQ, so the price signal is unchanged (GWh not modelled)
Fairness	<ul style="list-style-type: none"> • Misalignment of rates with peak period cost causation
Practicality	<ul style="list-style-type: none"> • Expected decrease in customer understanding • Increase in design complexity
Stability	<ul style="list-style-type: none"> • May increase revenue uncertainty • Increase in rate setting uncertainty

B. Should BC Hydro continue to consider a Seasonal Rate structure and if so, what additional analysis do stakeholders recommend (with reasons)?

CUSTOMER SPECIFIC BASELINE RATE

Context: 2008 RIB Proceeding

- Individual customer Step-1 thresholds suggested as an alternative to a standard threshold
- Considered as a means to manage bill impacts of implementing an inclining block structure
- BC Hydro rejected due to significant implementation challenges

Jurisdictional Snapshot

- No North American utilities offer individual Residential customer baseline rates

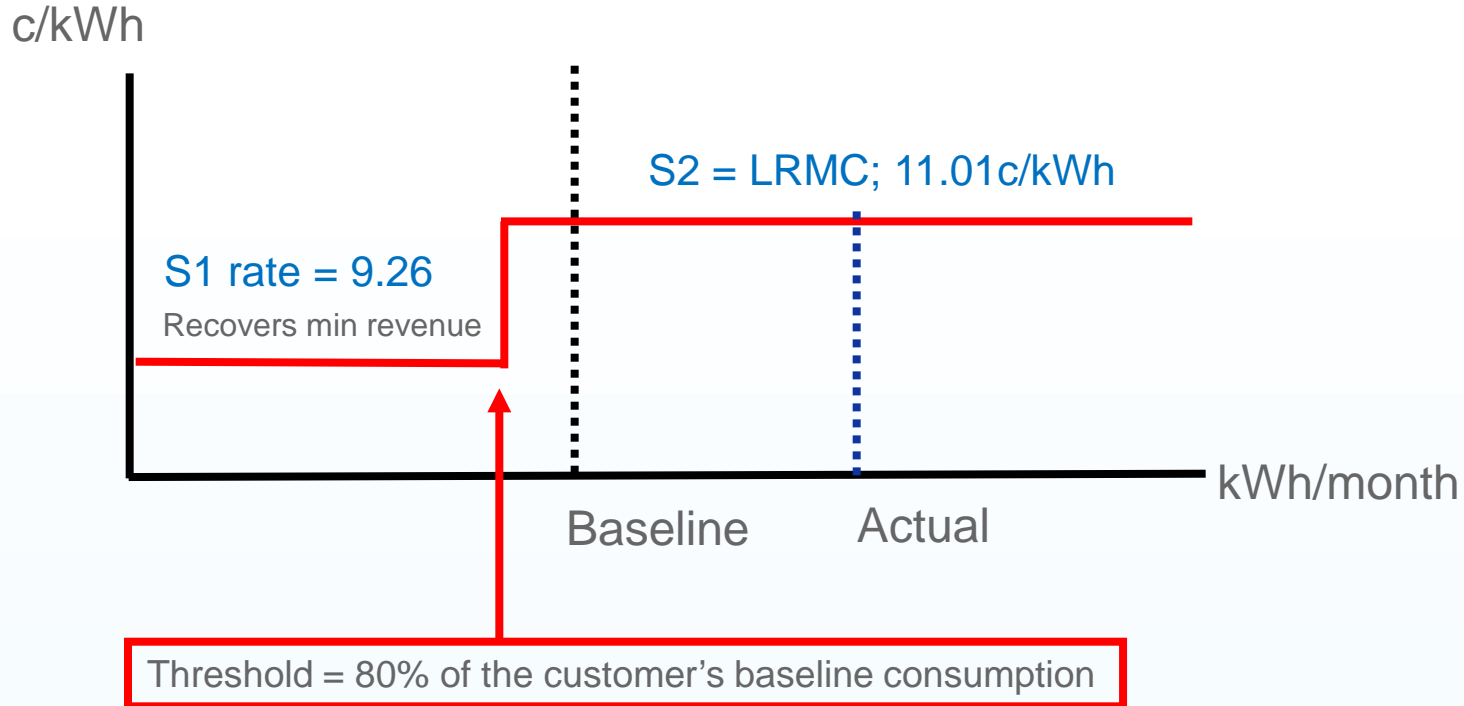
CUSTOMER SPECIFIC BASELINE RATE

Modelling Approach

- Conceptually designed the same as the Large General Service (**LGS**) 2-Part Rate, with credits and debits applied to a baseline consumption
- LRMC sets the Step 2 rate (\$11.01c/kWh); Step 1 rate residually calculated
- Pricing model assumes that actual consumption = baseline
- Customer thresholds are set at 80% of baseline consumption for illustration

CUSTOMER SPECIFIC BASELINE RATE

How it works:

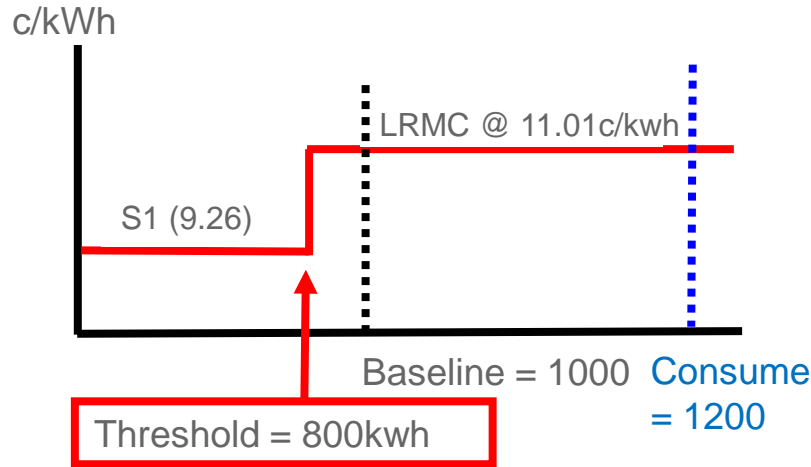


Observation

- Same concept as LGS rate structure except 1.7 million Residential customers instead of 6,000 LGS customers

CUSTOMER SPECIFIC BASELINE RATE

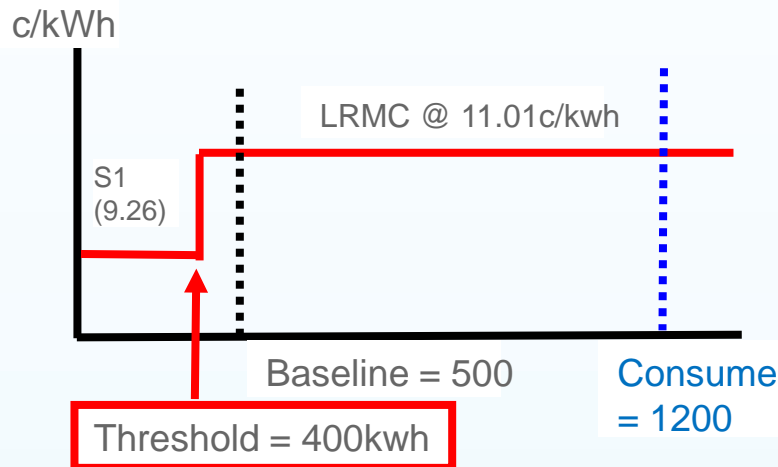
Implications on Application – Monthly Bill Illustration



Added Usage

$$\begin{aligned} \text{Bill} &= (800 \times 9.26\text{c/kwh} + 400 \times 11.01\text{c/kwh} + \text{basic } (\$65)) \\ &\quad \times (1 + \text{Rate Rider}) \\ &= (\$118 + \text{Basic } (\$65)) \times (1+5\%) = \$192 \end{aligned}$$

$$\begin{aligned} \text{Status Quo} &= (\$117 + \text{Basic } (\$65)) \times (1+5\%) = \$191 \\ \text{Variance from Status Quo} &= \underline{\text{Pay } \$1 \text{ more}} \end{aligned}$$



Family size increased

$$\begin{aligned} \text{Bill} &= (400 \times 9.26\text{c/kwh} + 800 \times 11.01 \text{ c/kwh} + \text{basic } (\$65)) \\ &\quad \times (1 + \text{Rate Rider}) \\ &= (\$125 + \text{Basic } (\$65)) \times (1+5\%) = \$200 \end{aligned}$$

$$\begin{aligned} \text{Status Quo} &= (\$117 + \text{Basic } (\$65)) \times (1+5\%) = \$191 \\ \text{Variance from Status Quo} &= \underline{\text{Pay } \$9 \text{ more}} \end{aligned}$$

Observation:

- Same consumption; different bills

CUSTOMER SPECIFIC BASELINE RATE

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> All customers exposed to LRMC-based price signal GWh conservation not modeled
Fairness	<ul style="list-style-type: none"> Negligible change in bills for most customers, but typical customers pay more Benefits concentrated to larger users (with greater Step 1 rate allowance)
Practicality	<ul style="list-style-type: none"> Significant decrease in customer understanding Administratively 'impossible' to set, maintain and bill baselines for 1.7 million Residential customers
Stability	<ul style="list-style-type: none"> Unknown impact on revenue Rate setting uncertainty

C. BC Hydro concludes that a Customer Specific Baseline Rate is not a viable option.

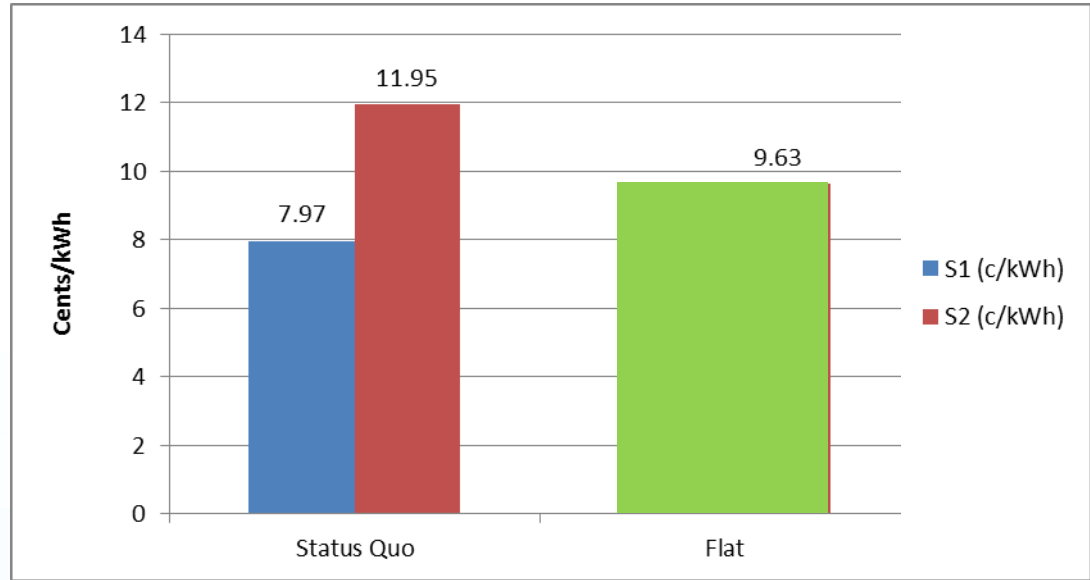
FLAT RATE

- **What objectives are supported by a flat rate design?**
 - Policy Action No. 4 of the BC Government's 2007 Energy Plan provides that BC utilities are to explore new rate structures that encourage energy efficiency and conservation
- **What are the implications to conservation, bill impacts, rate stability and continuity?**

FLAT RATE

Modeling Approach:

- Compute the equivalent F16 Flat Rate



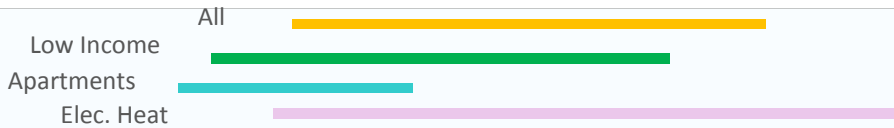
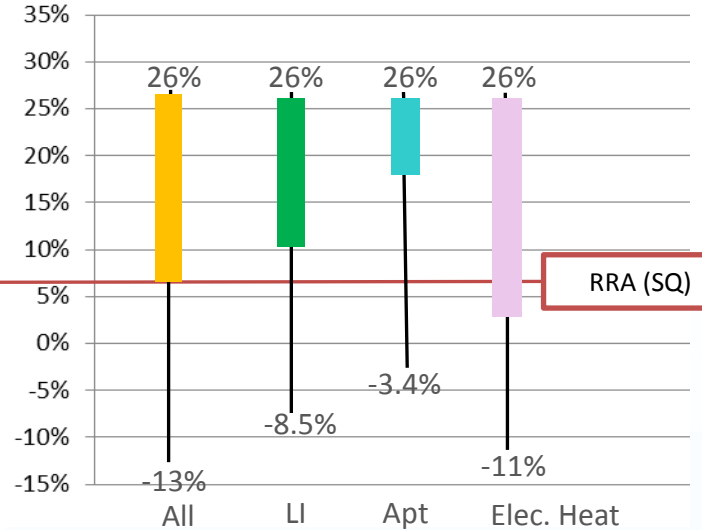
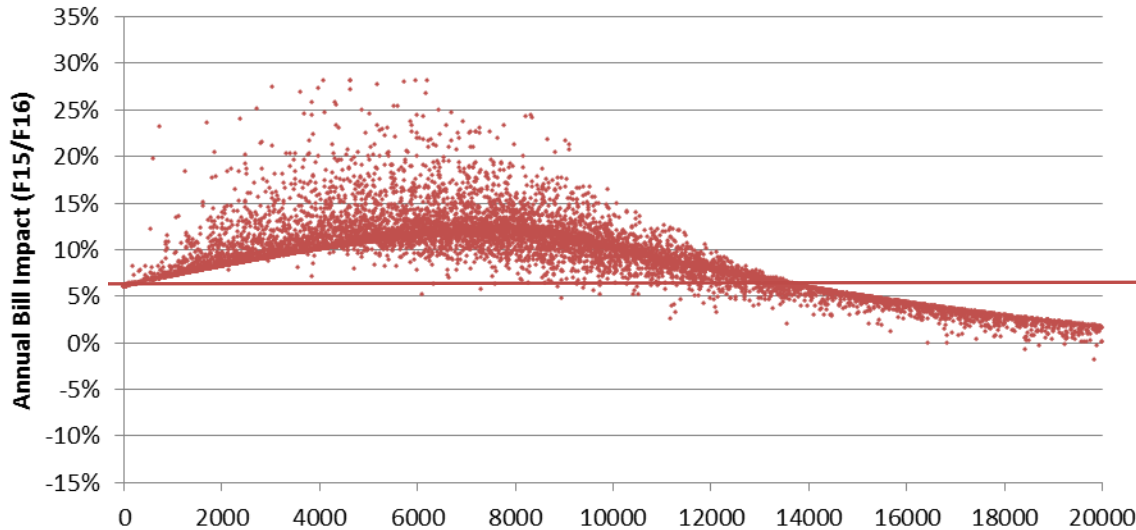
Observations

- Rate increase, relative to RIB Step 1 rate, results in higher bill impacts for most customers (next slide)
- Large reduction in conservation, due to a Flat rate lower than Step 2 Rate

Change from F15	Status Quo	Flat	F15 Rates Reference
S1 (c/kWh)	+6%	+28%	7.52
S2 (c/kWh)	+6%	-14%	11.27
Basic (\$0.1764/day)	+6%	+6%	0.1664
Inc. Conservation, F15 to F16. vs SQ		-286GWh from SQ	

FLAT RATE: BILL IMPACT DISTRIBUTIONS

Bill Impact Distribution vs kWh Annual Consumption



Bill Impact of customer segment
Color Bar: Middle 60%

Annual Consumption Range for the middle 60% of each customer segment

Customer Segments	Proportion Better off than SQ*	Median Bill of Segment	Median Bill Difference from SQ
All Customers	22%	\$928	\$109
Low Income	16%	\$676	\$105
Apartment	3%	\$433	\$29
Electric Heat	33%	\$1,042	\$29

Observations

- Most typical customers see higher bill impacts
- High consumers see lower bill impacts

* "Better off" = at least 1% lower than SQ bill

FLAT RATE

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> • Large reduction in conservation
Fairness	<ul style="list-style-type: none"> • Increase relative to the Step 1 rate results in high bill impacts for most customers, including low income customers
Practicality	<ul style="list-style-type: none"> • Comparatively easier to understand and administer
Stability	<ul style="list-style-type: none"> • Increase in revenue forecast certainty • Increase in rate setting certainty

D. BC Hydro considers that a Flat Rate is inconsistent with government policy and performs worse relative to the SQ in terms of efficiency and fairness considerations. BC Hydro therefore proposes that no further modeling is required, and asks for stakeholder comment.

ALTERNATIVE MEANS OF DELIVERING THE RIB

Alternative means raised by prior BCUC RIB decisions :

- Step 2 Rate = LRMC
- Step 1 / Step 2 Threshold alternatives
- Basic Charge & Minimum Charge alternatives

Evaluation:

- Jurisdictional assessment (where applicable)
- Modelling of rates, bill impacts and conservation (where possible)
- Evaluation against Bonbright criteria set out in Slide No. 5

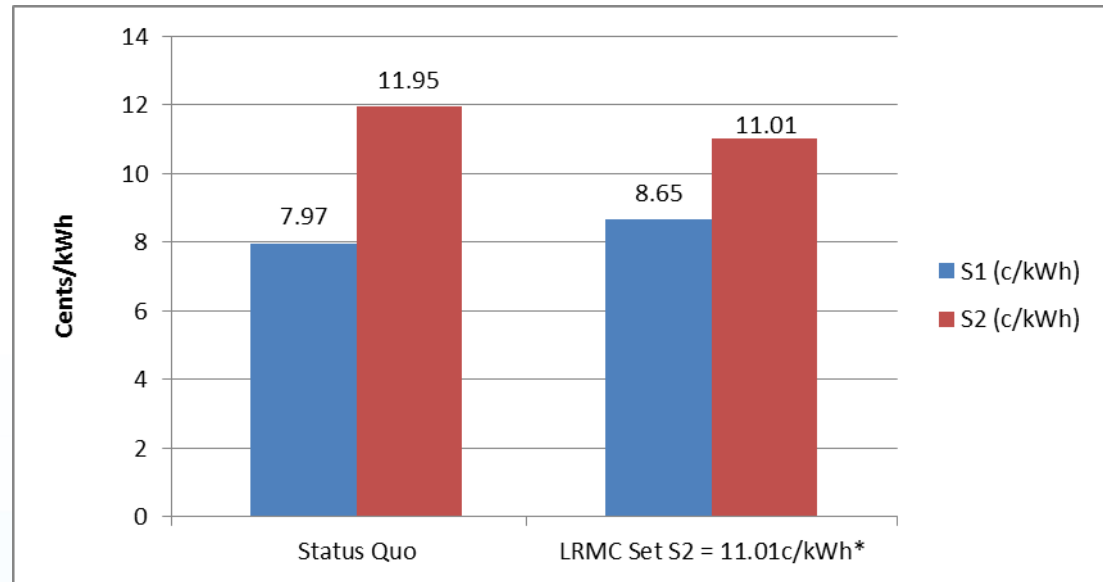
STEP 2 RATE = LRMC

- **The LRMC (energy) is the appropriate referent to a Step-2 rate:**
 - 3 BCUC RIB Decisions – BC Hydro
 - 1 BCUC RIB Decision – FortisBC
- **The current Step 2 rate > LRMC**
- **Should a RIB rate pricing principle constrain the Step-2 rate to equal LRMC?**

STEP 2 RATE = LRMC

Modeling Approach:

- Set Step 2 rate = LRMC (upper bound)
- Step 1 rate computed residually
- No change to Basic Charge



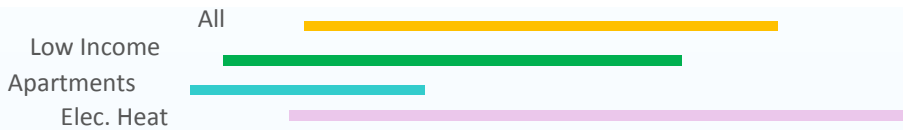
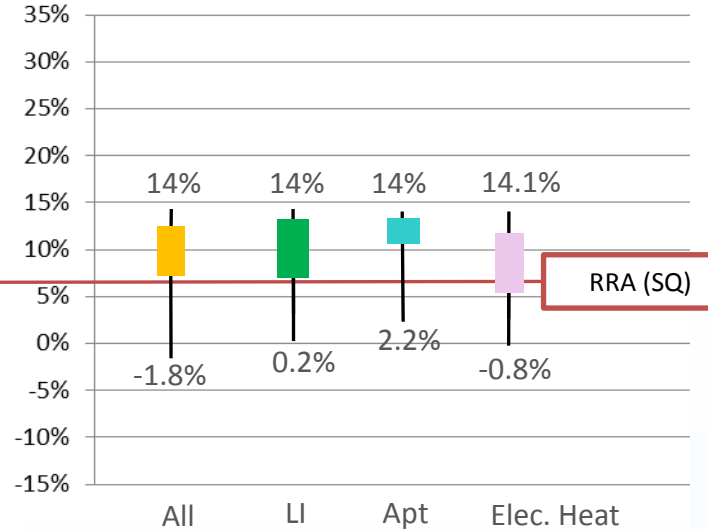
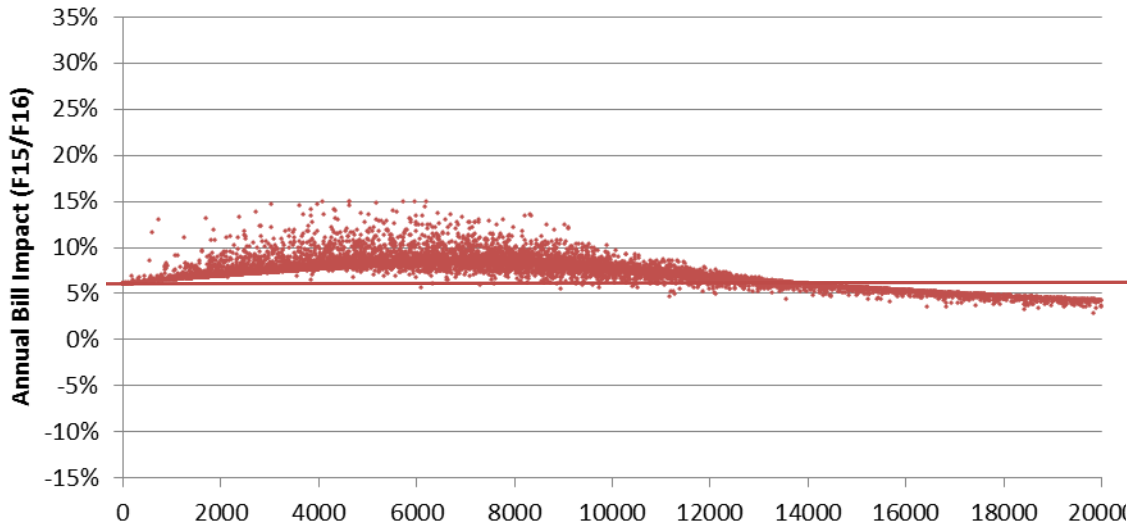
Observations:

- Large increase to Step 1 rate results in higher bill impacts for most customers (next slide)
- Large reduction in conservation due to lower Step 2 Rates

Change from F15	Status Quo	LRMC Set S2=11.01c/kWh	F15 Rates Reference
S1 (c/kWh)	+6%	+15%	7.52
S2 (c/kWh)	+6%	-2%	11.27
Basic (\$0.1764/day)	+6%	+6%	0.1664
Inc. Conservation GWh, F15 to F16. vs SQ		-106 from SQ	

STEP 2 RATE = LRMC: BILL IMPACT DISTRIBUTIONS

Bill Impact Distribution vs kWh Annual Consumption



Bill Impact of customer segment
Color Bar: Middle 60%

Annual Consumption Range for the middle 60% of each customer segment

Customer Segments	Proportion Better off than SQ*	Median Bill of Segment	Median Bill Difference from SQ
All Customers	21%	\$864	\$45
Low Income	16%	\$614	\$43
Apartment	3%	\$433	\$29
Electric Heat	32%	\$1,041	\$29

Observations

- Most typical customers see higher bill impacts
- High consumers see lower bill impacts

* "Better off" = at least 1% lower than SQ bill

STEP-2 RATE = LRMC

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> • Price signal = LRMC • Reduced conservation compared to SQ
Fairness	<ul style="list-style-type: none"> • Increase to the Step 1 rate results in moderate to high bill impacts for most customers, including low income customers
Practicality	<ul style="list-style-type: none"> • Same as the SQ RIB
Stability	<ul style="list-style-type: none"> • Same as the SQ RIB

- E. BC Hydro seeks input on whether a RIB rate pricing principle should constrain the Step-2 rate to equal LRMC.**
- F. Are there compelling reasons to depart from prior BCUC Decisions that the LRMC is the appropriate referent to a Step 2 rate, and if so what is the alternative?**

STEP 1 / STEP 2 THRESHOLD

Revisit the setting of the Step-1 to Step-2 threshold level: BCUC Order No. G-13-14

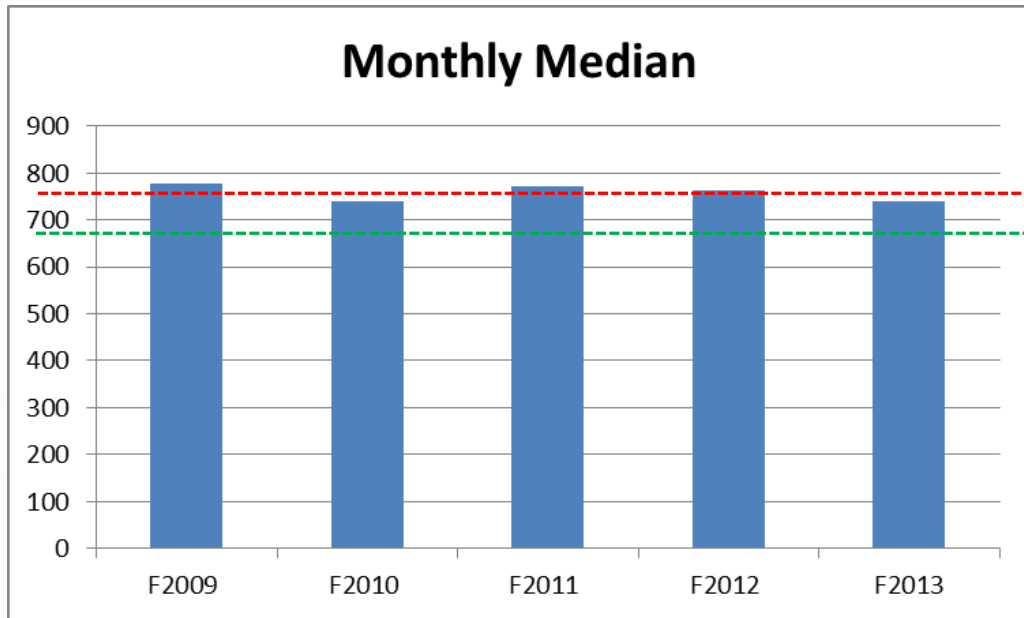
- Does the current threshold remain appropriate?

STEP 1 / STEP 2 THRESHOLD

Modelling Approach:

1. Review current threshold (set in 2008 using the median at the time)(675 kWh/month)
2. Review Alternatives
 - Ranges developed around typical Residential use:
 - Set threshold at 635 kWh/month, the 85% of median consumption from F09 to F13
 - Set threshold at 719 kWh/month, where a maximum Bill impact = 10% is experienced.
 - Set threshold at 758 kWh/month, the average median consumption from F09 to F13
 - Set threshold at 917 kWh/month, the average mean consumption from F09 to F13
3. Residually calculate Step 2
4. Step 1 Rate is SQ

CURRENT STEP 1/STEP 2 THRESHOLD VS. 2008 THRESHOLD SETTING METHOD



Threshold setting

Median Customer (762 kwh/month) at time of 2008 decision

Current Threshold at 675 kWh/month, determined by BCUC, which is ~90% of median consumption

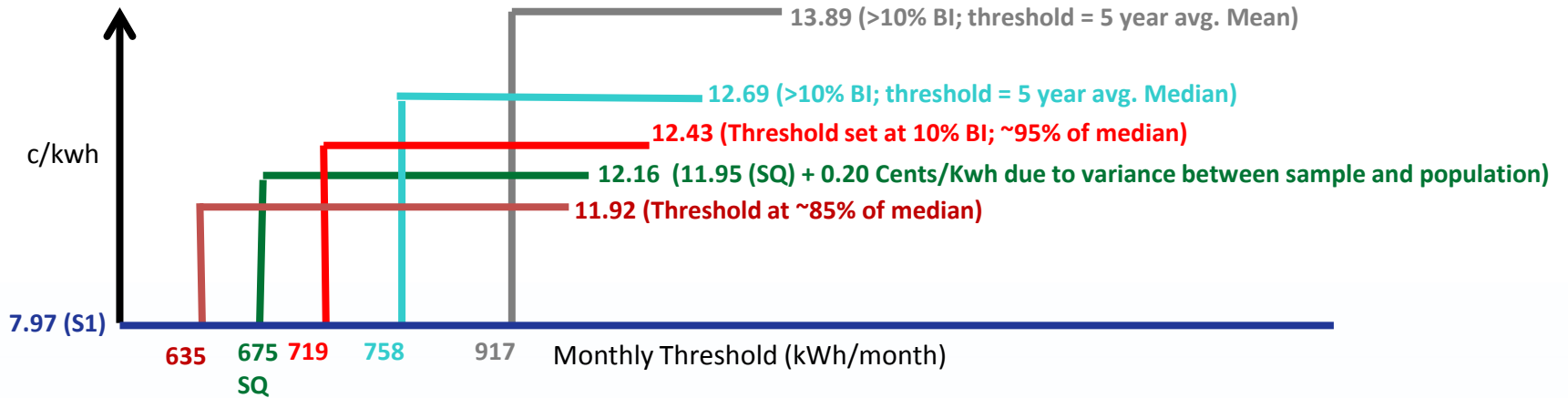
Rational:

(BCUC 2008 decision, page 107)

- Reflects typical residential use
- Fairness
- Cause materially more customers seeing Step 2 at least once a year (conservation), as compared to the 2008 RIB BC Hydro proposed threshold of 800 kWh/mo.

in KWh	Monthly Median	90% of the Monthly Median
F2009	777	699
F2010	739	665
F2011	772	695
F2012	762	686
F2013	739	665
5-yr Average	758	682
Threshold	Based on 762	675

ALTERNATIVE STEP 1 / STEP 2 THRESHOLDS



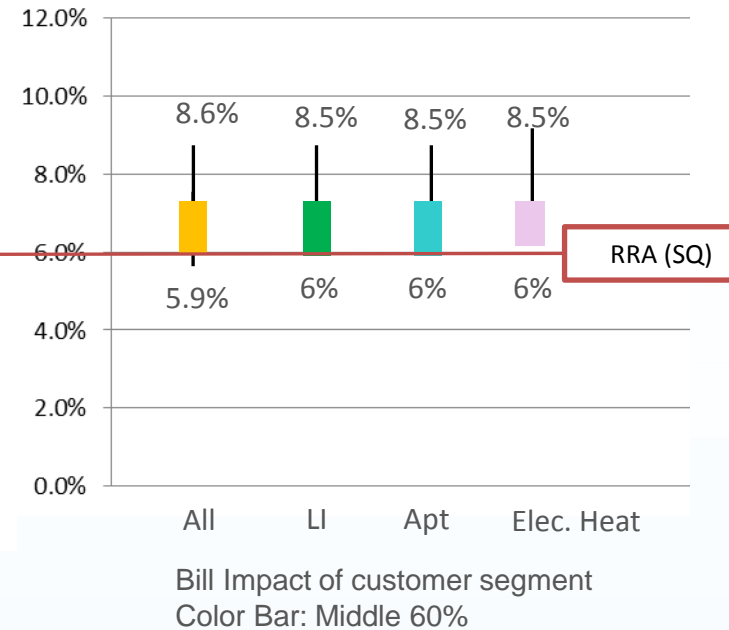
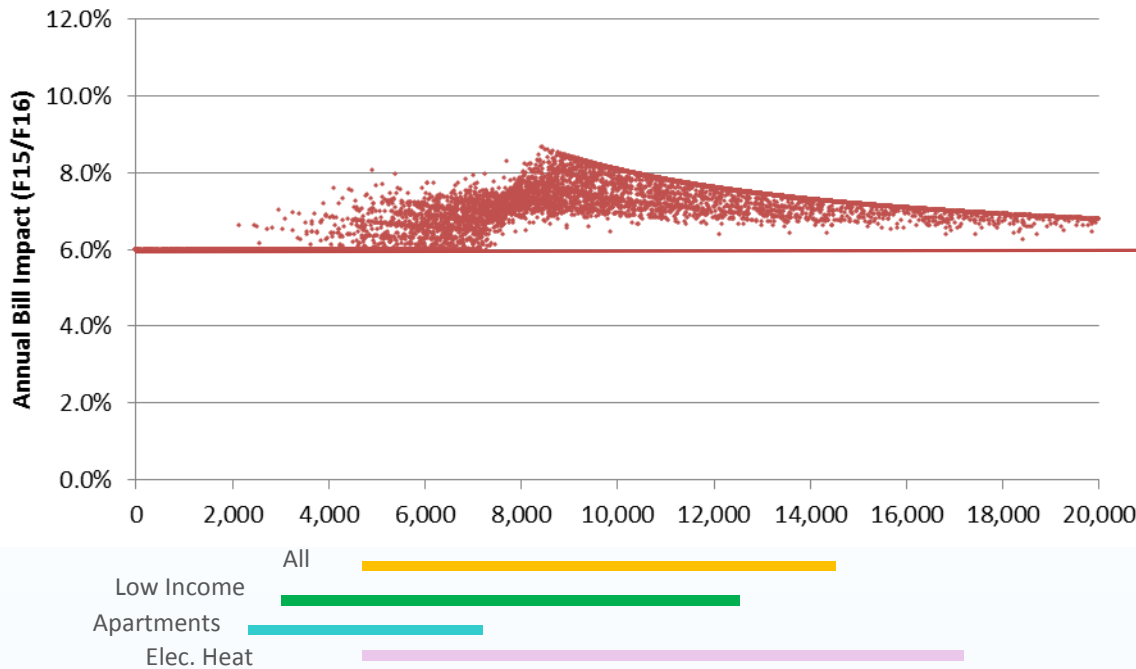
Change from F15	Status Quo (675)	Threshold at 85% of median (635)	Threshold at 10% BI (719)	Threshold at F09-F13 Median (758) (Exceed 10% BI)	Threshold at F09-F13 Mean (917) (Exceed 10% BI)
S1 (c/kWh)	6%	6%	6%	6%	6%
S2 (c/kWh)	6%	~6%	10%	13%	23%
Basic (\$0.1764/day)	6%	6%	6%	6%	6%
Inc. Conservation GWh, F15 to F16. vs SQ		-28 from SQ	+26 from SQ	+54 from SQ	+143 from SQ

Observations:

- Step 2 increases as threshold increase
- Reduction of threshold to 635 kWh results in a minor reduction in Step 2 rate
- 10% Bill Impact exceeded for thresholds exceeding 719 kWh/month
- Conservation increases as thresholds increase, due to higher Step 2 rate

635 KWH THRESHOLD (85% MEDIAN) : BILL IMPACT DISTRIBUTIONS

Bill Impact Distribution vs kWh Annual Consumption



Annual Consumption Range for the middle 60% of each customer segment

Customer Segments	Proportion Better off than SQ *	Median Bill of Segment	Median Bill Difference from SQ
All Customers	1%	\$831	\$11
Low Income	1%	\$571	\$0
Apartment	0%	\$404	\$0
Electric Heat	2%	\$1,024	\$12

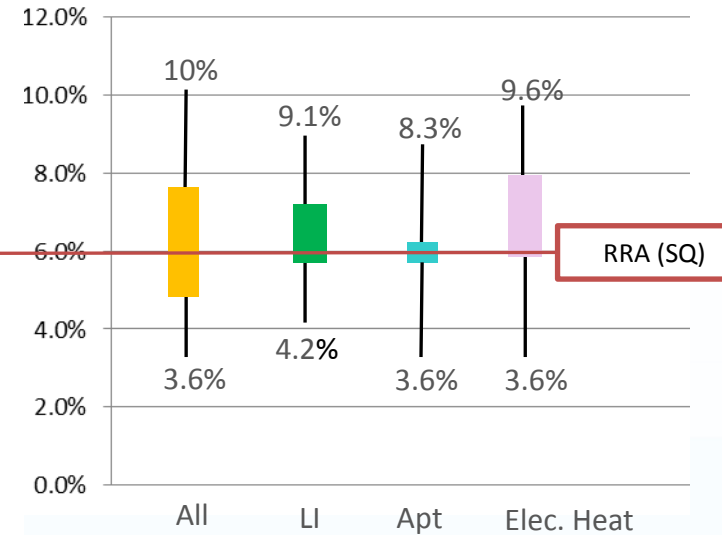
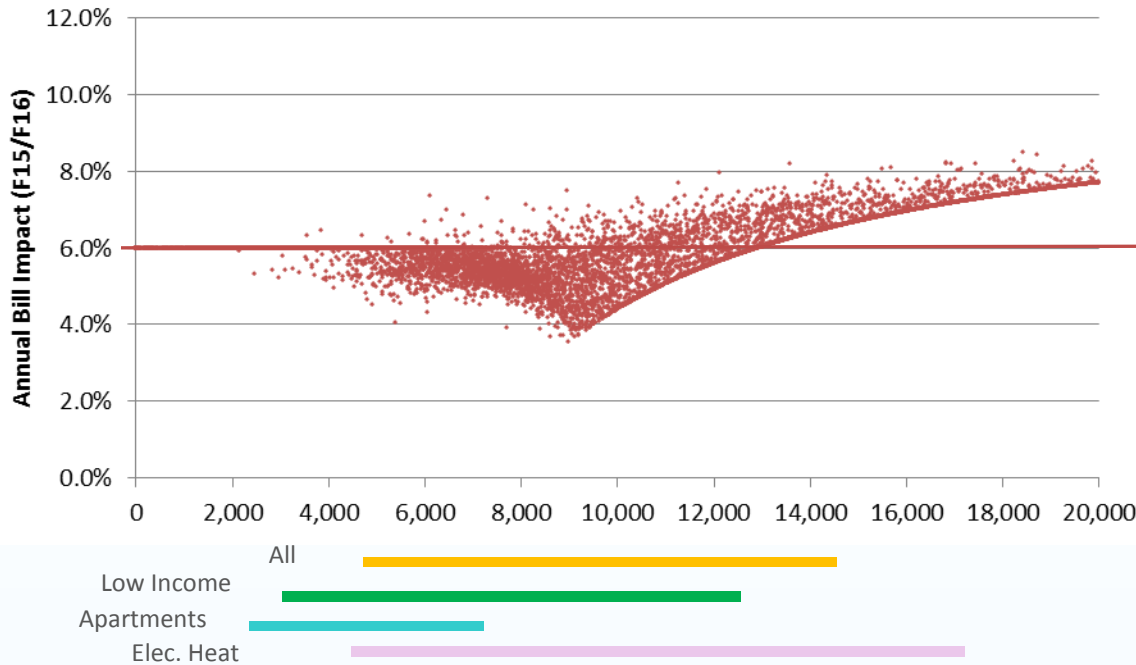
* "Better off" = at least 1% lower than SQ bill

Observations:

- Most customers have higher bill impacts
- Lowest bill impact is 5.9%, for largest customer
- Highest impacted customers are the ones having typical consumption

719 KWH THRESHOLD (10% BI): BILL IMPACT DISTRIBUTIONS

Bill Impact Distribution vs kWh Annual Consumption



Annual Consumption Range for the middle 60% of each customer segment

Customer Segments	Proportion Better off than SQ *	Median Bill of Segment	Median Bill Difference from SQ
All Customers	13%	\$811	(\$8)
Low Income	7%	\$570	\$0
Apartment	4%	\$404	\$0
Electric Heat	7%	\$1,011	(\$2)

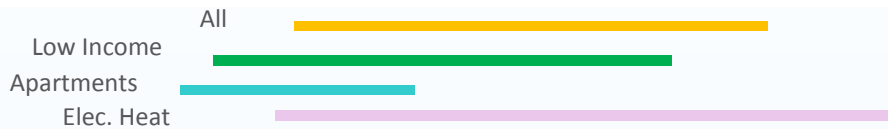
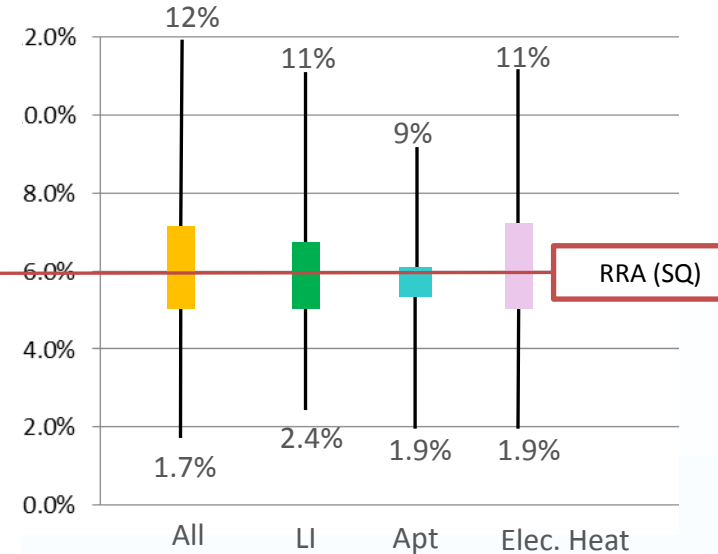
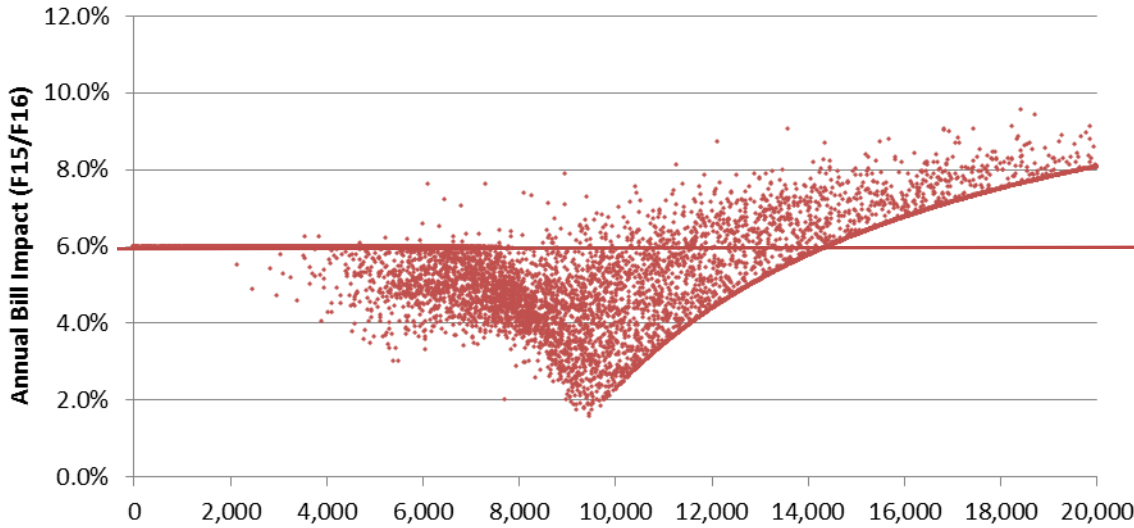
* "Better off" = at least 1% lower than SQ bill

Observations

- Some variations in bill impacts
- Higher-than-average consumers see higher bill impacts
- 10% Bill impact customer is >150MWh/yr

758 KWH THRESHOLD (5YR MEDIAN): BILL IMPACT DISTRIBUTIONS

Bill Impact Distribution vs kWh Annual Consumption



Annual Consumption Range for the middle 60% of each customer segment

Bill Impact of customer segment
Color Bar: Middle 60%

Observations:

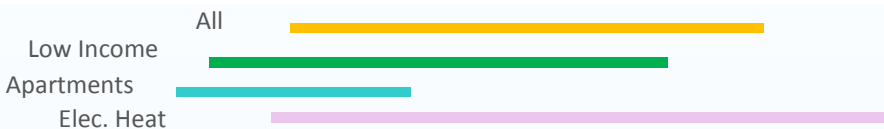
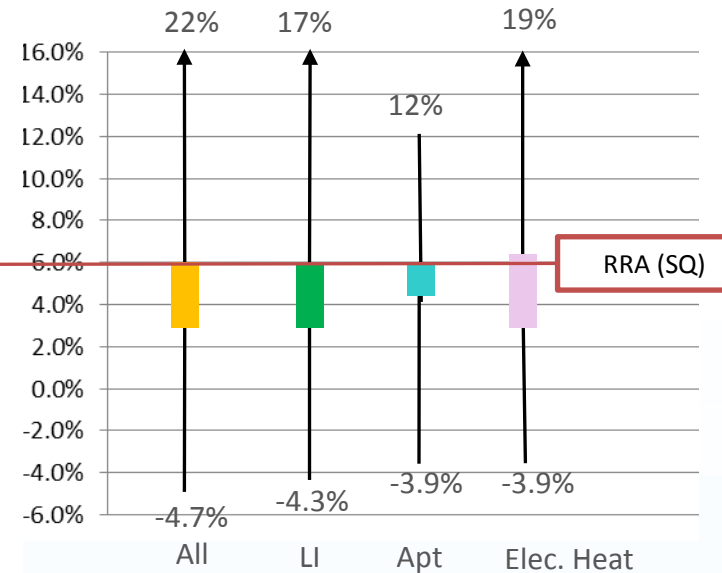
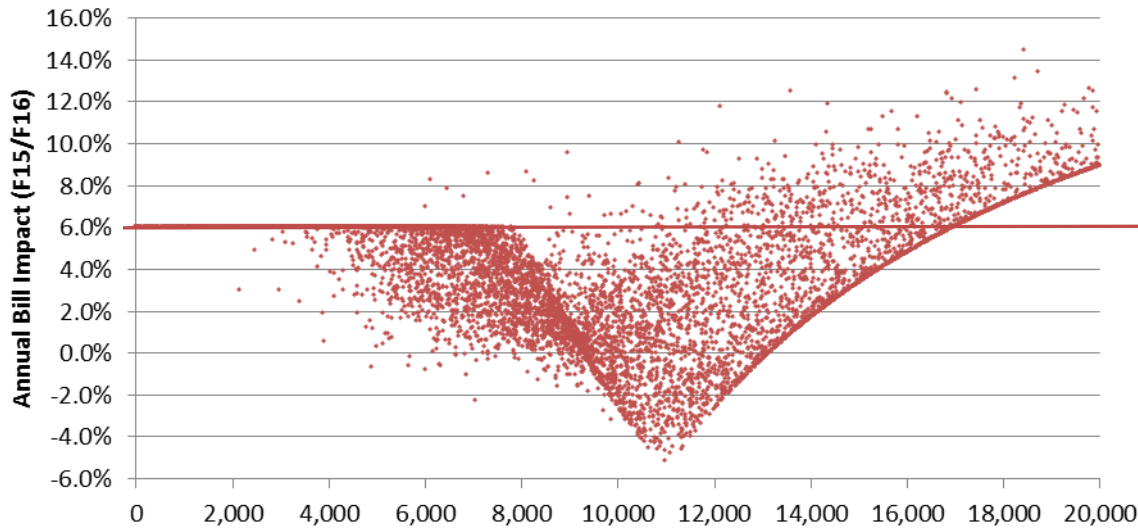
- High variations in bill impacts
- Higher-than-average consumers see higher bill impacts
- 10% Bill impact exceeded at consumption ~30,000kwh/yr

Customer Segments	Proportion Better off than SQ*	Median Bill of Segment	Median Bill Difference from SQ
All Customers	33%	\$803	(\$17)
Low Income	23%	\$570	\$0
Apartment	20%	\$404	\$0
Electric Heat	27%	\$1,003	(\$9)

* "Better off" = at least 1% lower than SQ bill

917 KWH THRESHOLD (5YR MEAN): BILL IMPACT DISTRIBUTIONS

Bill Impact Distribution vs kWh Annual Consumption



Annual Consumption Range for the middle 60% of each customer segment

Bill Impact of customer segment
Color Bar: Middle 60%

Customer Segments	Proportion Better off than SQ*	Median Bill of Segment	Median Bill Difference from SQ
All Customers	44%	\$781	(\$38)
Low Income	36%	\$571	\$0
Apartment	26%	\$404	\$0
Electric Heat	42%	\$971	(\$42)

Observations:

- High variations in bill impacts
- Higher-than-average consumers see higher bill impacts
- 10% Bill impact exceeded at consumption ~12,000kwh/yr

* "Better off" = at least 1% lower than SQ bill

STEP 1 / STEP 2 THRESHOLD

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> The Step 2 rate diverges further from LRMC as the threshold increases
Fairness	<ul style="list-style-type: none"> Moderate threshold decrease: Nearly all customers face higher bill impacts (though relatively small) Moderate threshold increase: Lower bill impacts for typical customers (given Step 1 rate = SQ) High threshold increase: May lower bills to some customers, but with larger customers facing bill impacts > 10%
Practicality	<ul style="list-style-type: none"> Same as the SQ RIB
Stability	<ul style="list-style-type: none"> Under high thresholds possible increased variability in revenues from changes in large customer consumption

G. BC Hydro seeks input on whether there are compelling reasons to change the SQ RIB threshold and if so, what additional analysis do stakeholders recommend (with reasons)?

H. BC Hydro seeks input on why BC Hydro would model very low thresholds (500, 400, other kWh/mo.) as they do not reflect typical Residential use. What is the objective basis for a very low threshold?

BASIC AND MINIMUM CHARGES

Interaction of the Basic Charge and the RIB rate structure: BCUC Order No. G-13-14

Minimum Charge and cost of remaining attached to the system: BCUC Order No. G-13-14

1. What is the purpose of Basic and Minimum charges?
 - Residential Basic Charge introduced in 1977 – intended to recover a portion of BC Hydro’s fixed distribution and customer care costs, which do not vary with usage
 - Minimum charges intended to recover a minimum contribution toward customer-related fixed costs. Currently, BC Hydro Minimum Charge is the Basic Charge
2. Should the Basic Charge be increased toward cost-based, or decreased?
3. Should the Minimum Charge be decoupled from the Basic Charge?
 - Reflect cost of remaining attached to the system during periods of very low consumption or dormancy?
4. What level of Minimum Charge would be appropriate?

BASIC AND MINIMUM CHARGES

Jurisdictional Snapshot

- Current BC Hydro Basic Charge = 16.64¢ per day \approx 30% recovery of customer-related fixed costs assigned to the Residential class
- Customer-related fixed cost recovery ranges from 22% - 100%, with most utilities in the 35%-65% range
- All utilities surveyed have some form of Residential fixed customer-related charge or minimum charge

BASIC AND MINIMUM CHARGES

Modelling Approach

- Step 2 held constant
- Step 1 is residually calculated
- Excess revenue from the application of Minimum Charges and higher Basic Charges is applied to lower the Step 1 rate and distribute the benefit to all Residential customers
- Alternatives:

No Basic
\$0 Minimum

SQ Basic Charge

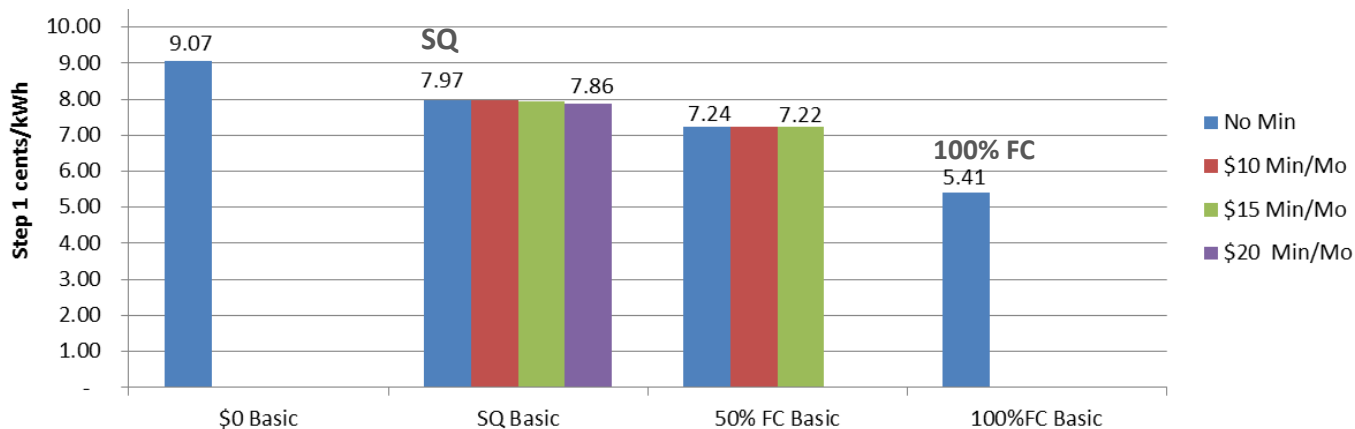
\$0 Min per month (SQ)	\$10 Min per month	\$15 Min per month	\$20 Min per month
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50% Fixed Cost (FC) Recovery – Basic Charge

\$0 Min per month	\$10 Min per month	\$15 Min per month
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100% FC Basic
\$0 Minimum

BASIC AND MINIMUM CHARGES



Observations:

- Minimum Charge has no material impact for a given Basic Charge
- Basic Charge a bigger driver of impacts
- No substantive impact to conservation

Proposed Modelling produces outcomes that exceed the 10% Bill impact cap

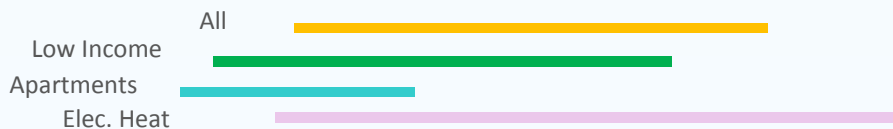
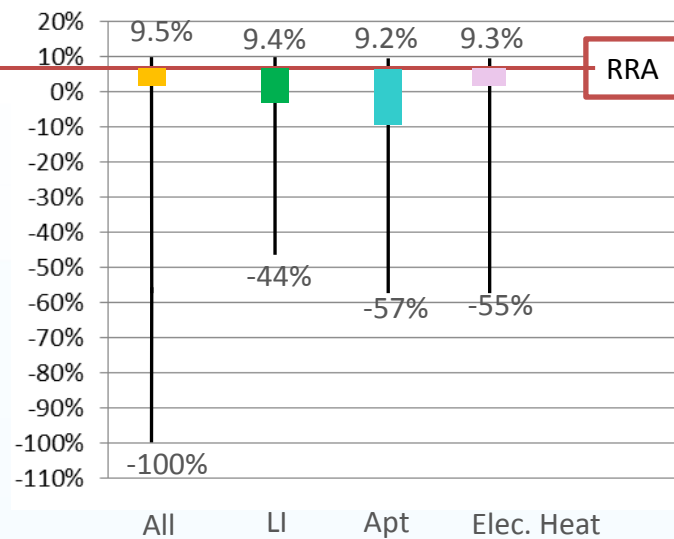
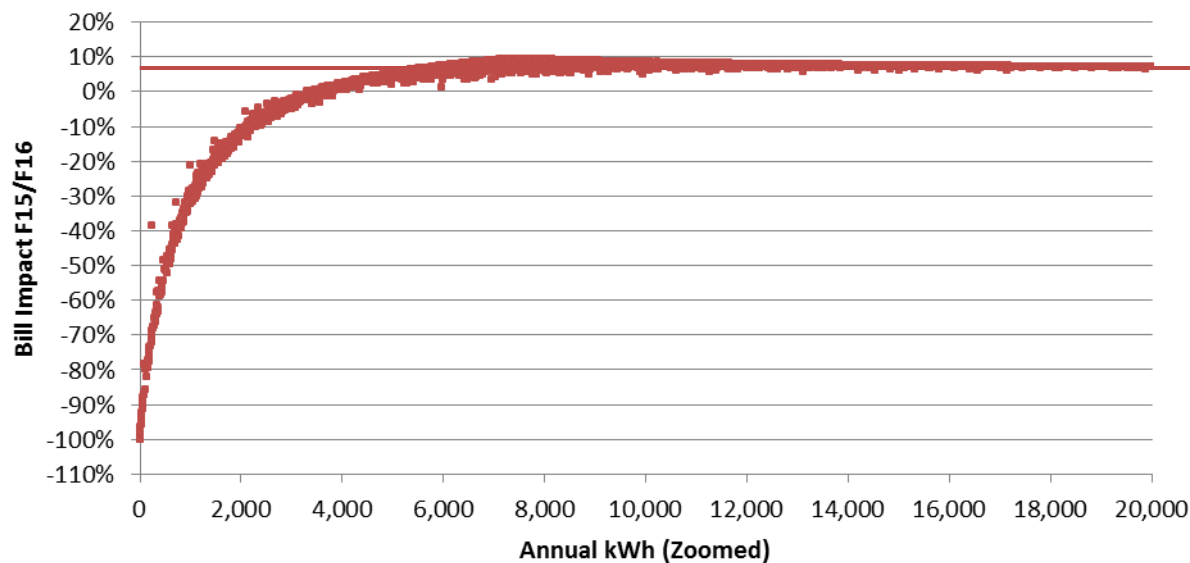
Tariff Rates, F16	No Basic	SQ Basic				50% FC Basic			100% Basic	F15 Rates
	\$0 Minimum	\$0 Min per month (SQ)	\$10 Min per month	\$15 Min per month	\$20 Min per month	\$0 Min per month	\$10 Min per month	\$15 Min per month	\$0 Minimum	
S1 (c/kWh)	9.07	7.97	7.96	7.93	7.86	7.24	7.24	7.22	5.41	
S2 (c/kWh)	11.95	11.95	11.95	11.95	11.95	11.95	11.95	11.95	11.95	
Basic (\$/day)	0.0000	0.1764	0.1764	0.1764	0.1764	0.2940	0.2940	0.2940	0.5880	
Change from F15										
S1 (c/kWh)	21%	6%	6%	5%	5%	-4%	-4%	-4%	-28%	7.52
S2 (c/kWh)	6%	6%	6%	6%	6%	6%	6%	6%	6%	11.27
Basic \$/day)	-100%	6%	6%	6%	6%	77%	77%	77%	253%	0.1664
Inc. Conservation, F15 to F16. vs SQ	23	0	0	0	-2	-17	-17	-17	-68	

\$0 BASIC, \$0 MINIMUM CHARGE: BILL IMPACT DISTRIBUTIONS

Observation:

- Benefits to very low consumers

Bill Impact Distribution



Annual Consumption Range for the middle 60% of each customer segment

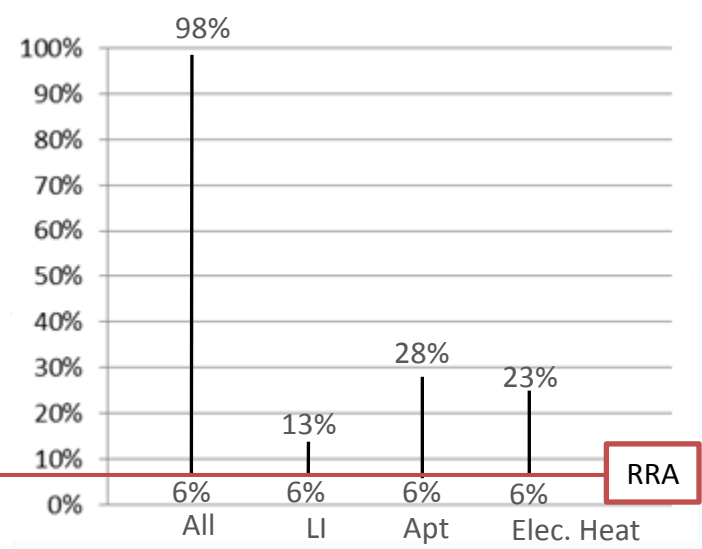
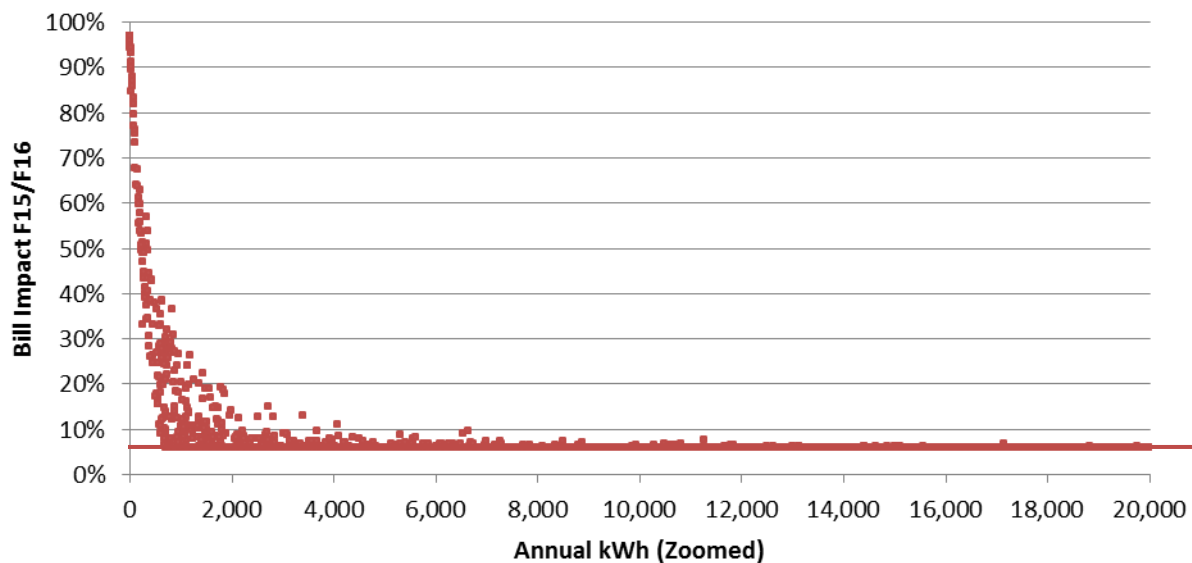
Bill Impact of customer segment
Color Bar: Middle 60%

SQ BASIC / \$10 MINIMUM: BILL IMPACT DISTRIBUTIONS

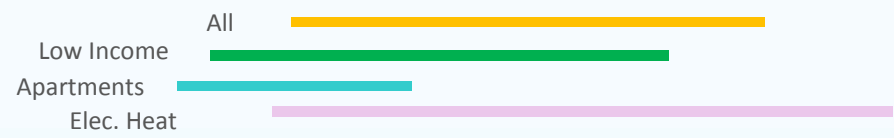
Observations:

- Negligible impact on typical customers
- High bill impacts to customers with very low consumption

Bill Impact Distribution



Bill Impact of customer segment
Color Bar: Middle 60%



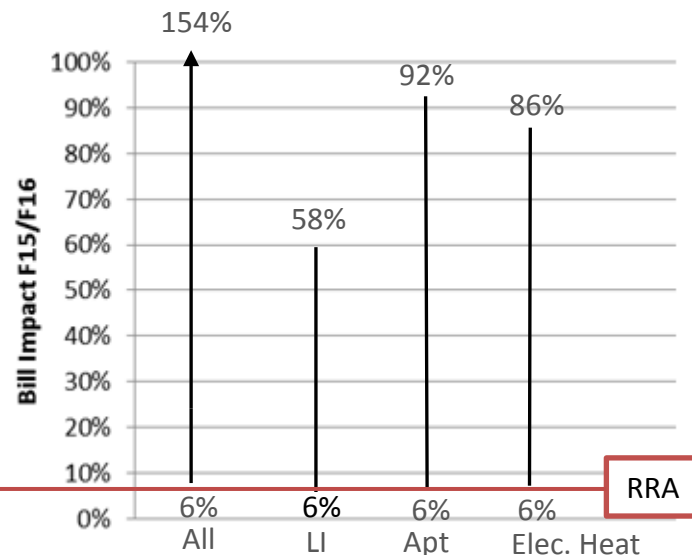
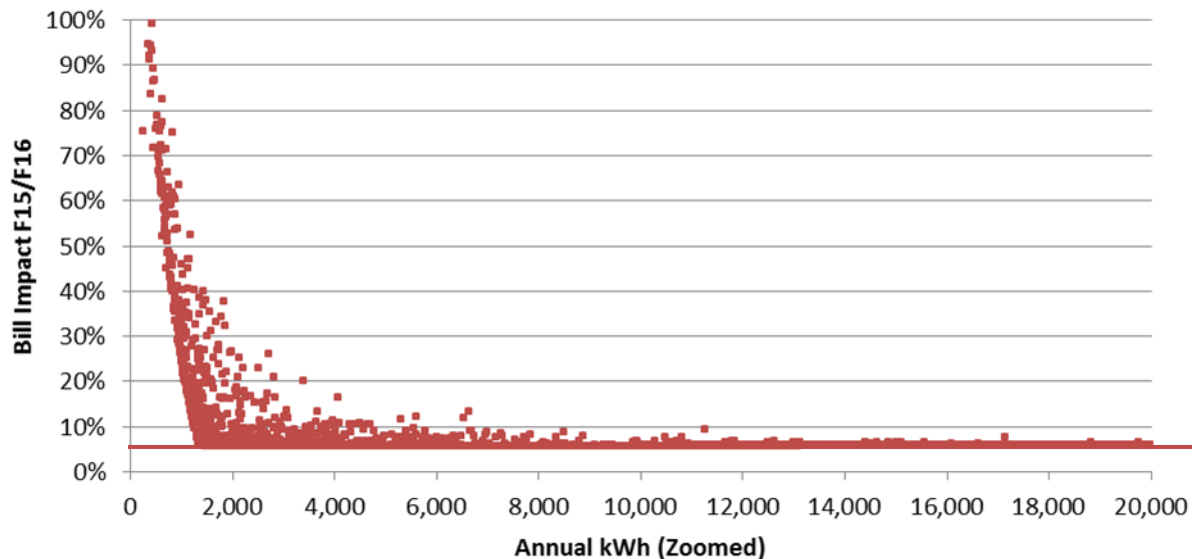
Annual Consumption Range for the middle 60% of each customer segment

SQ BASIC / \$15 MINIMUM: BILL IMPACT DISTRIBUTIONS

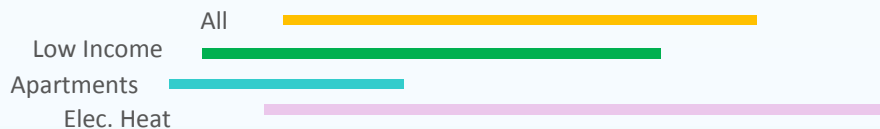
Observations:

- Negligible impact on typical customers.
- High bill impacts to customers with very low consumption

Bill Impact Distribution



Bill Impact of customer segment
Color Bar: Middle 60%



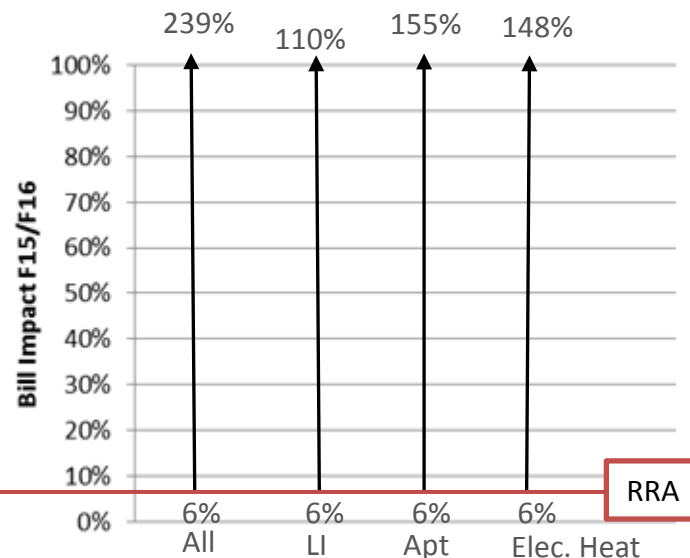
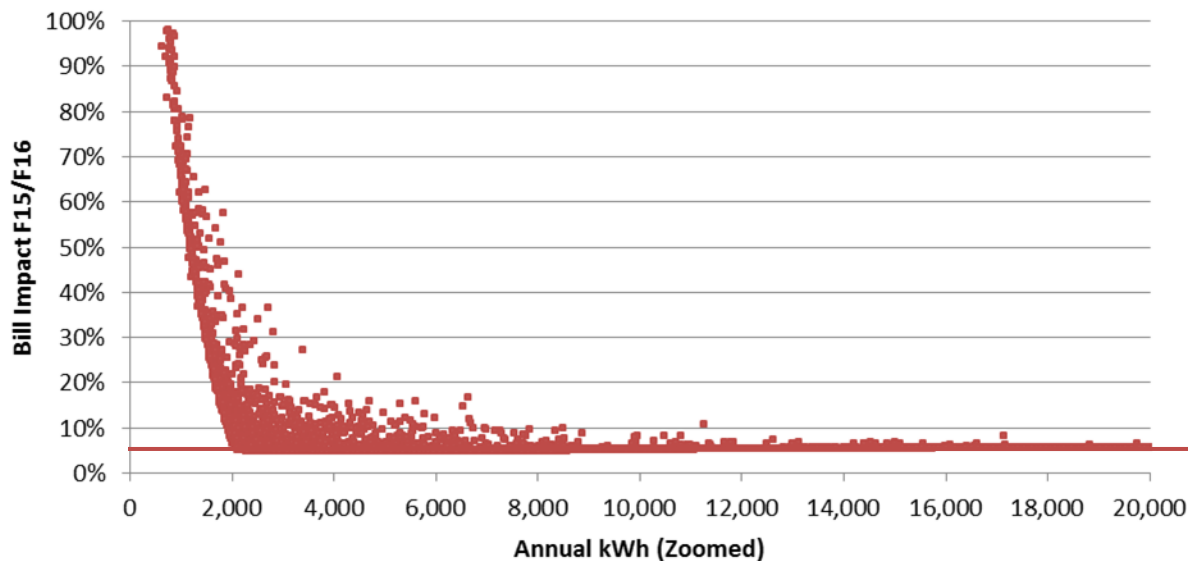
Annual Consumption Range for the middle 60% of each customer segment

SQ BASIC / \$20 MINIMUM: BILL IMPACT DISTRIBUTIONS

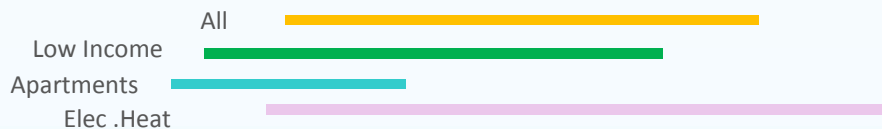
Observations:

- Negligible impact on typical customers.
- High bill impacts to customers with very low consumption

Bill Impact Distribution



Bill Impact of customer segment
Color Bar: Middle 60%



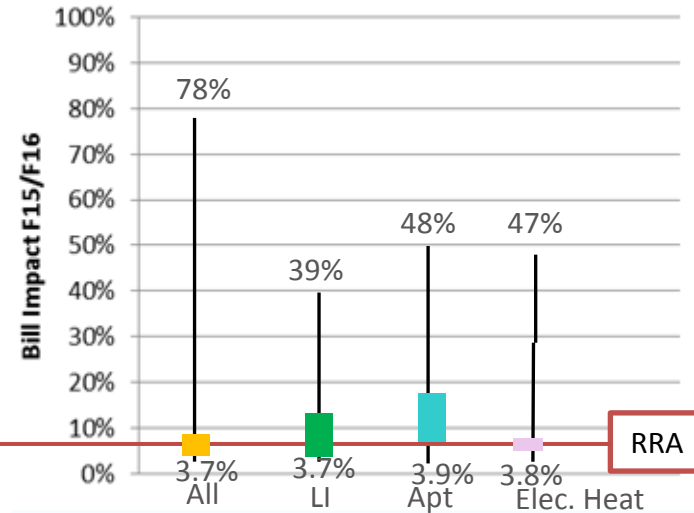
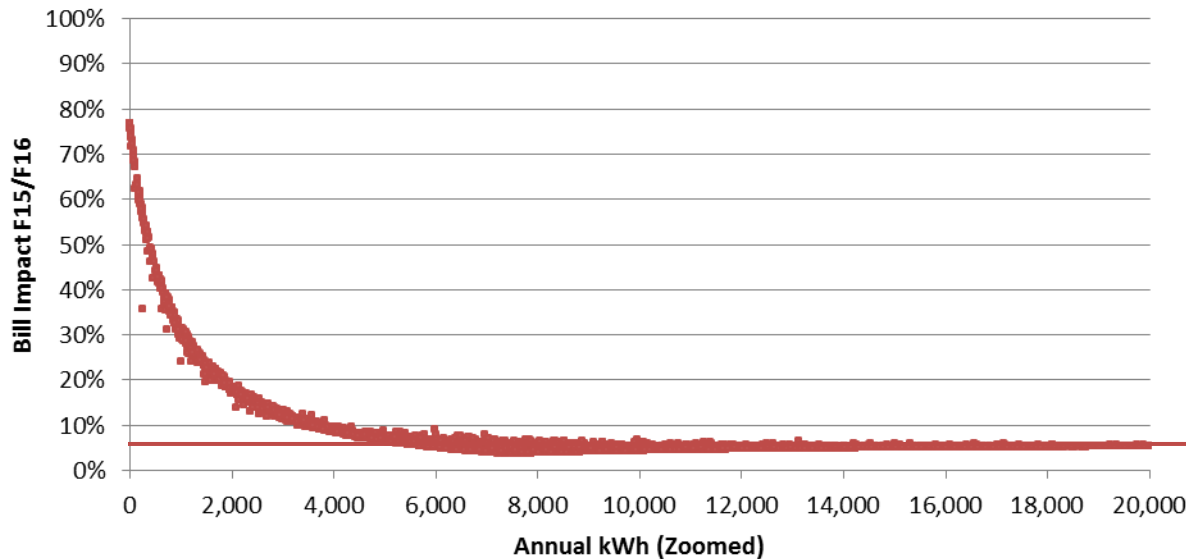
Annual Consumption Range for the middle 60% of each customer segment

BASIC = 50% FIXED / \$0 MINIMUM: BILL IMPACT DISTRIBUTIONS

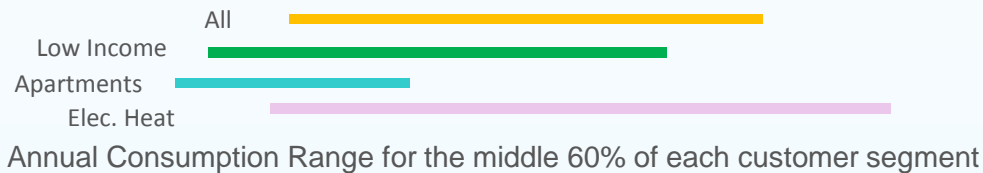
Observations:

- Some impact to below average users
- High bill impacts to customers with very low consumption

Bill Impact Distribution



Bill Impact of customer segment
Color Bar: Middle 60%

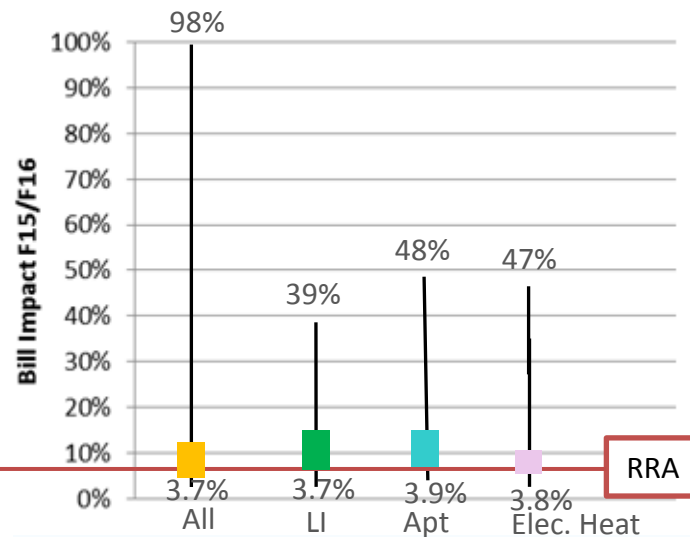
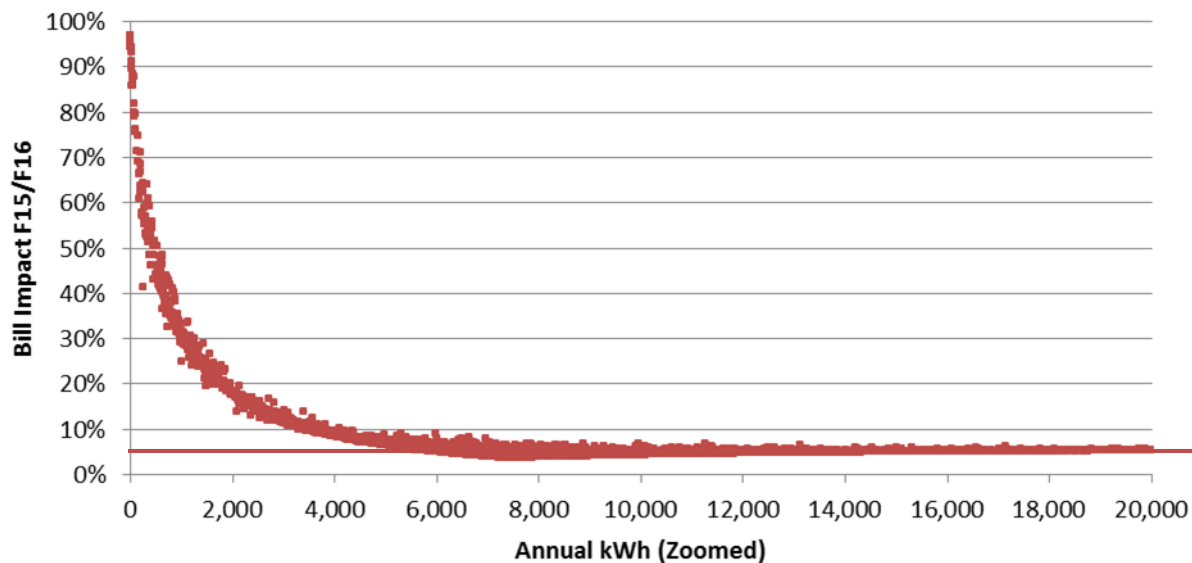


BASIC = 50% FIXED / \$10 MINIMUM: BILL IMPACT DISTRIBUTIONS

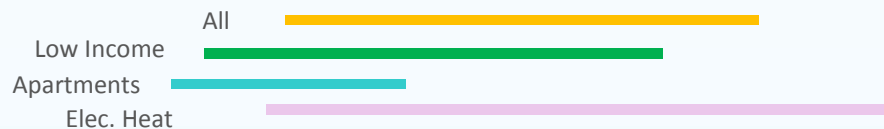
Observations:

- Some impact to below average users
- High bill impacts to customers with very low consumption

Bill Impact Distribution



Bill Impact of customer segment
Color Bar: Middle 60%



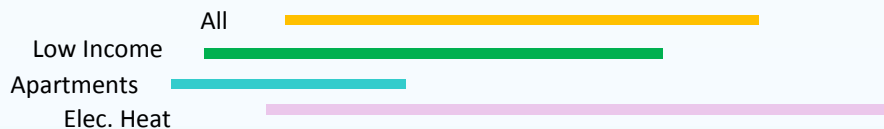
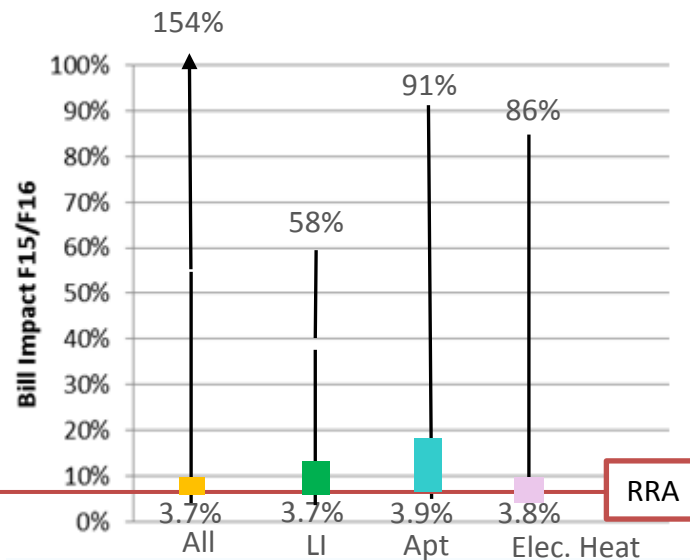
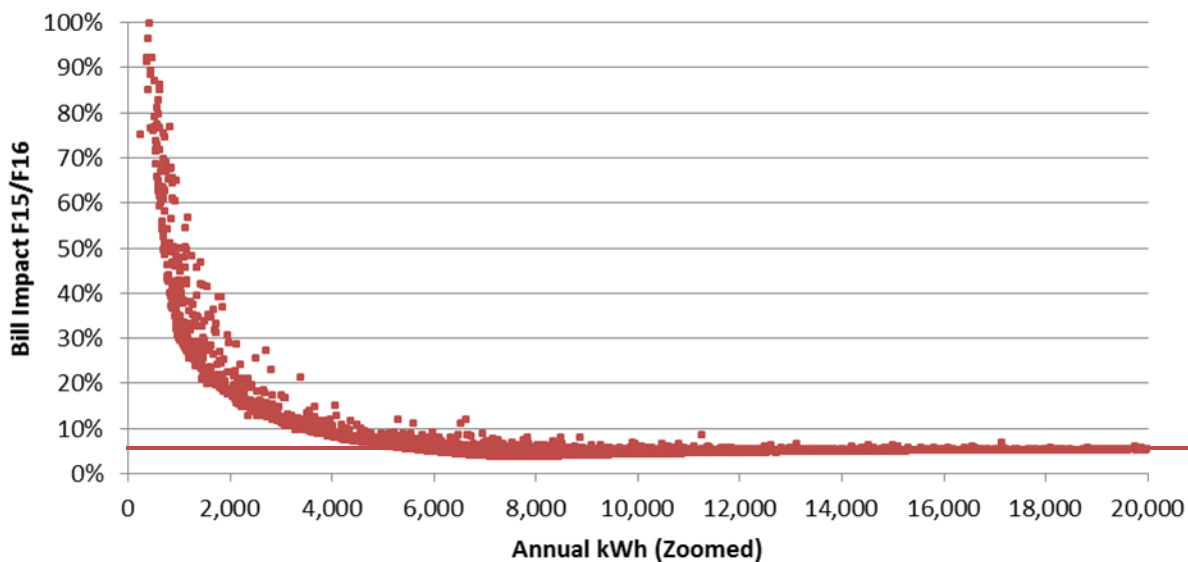
Annual Consumption Range for the middle 60% of each customer segment

BASIC = 50% FIXED / \$15 MINIMUM: BILL IMPACT DISTRIBUTIONS

Observations:

- Some impact to below average users
- High bill impacts to customers with very low consumption

Bill Impact Distribution



Annual Consumption Range for the middle 60% of each customer segment

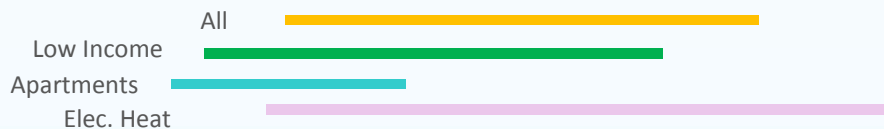
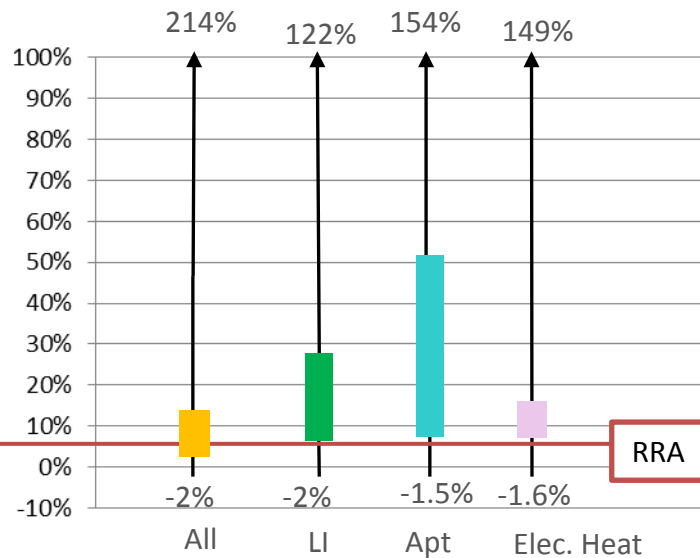
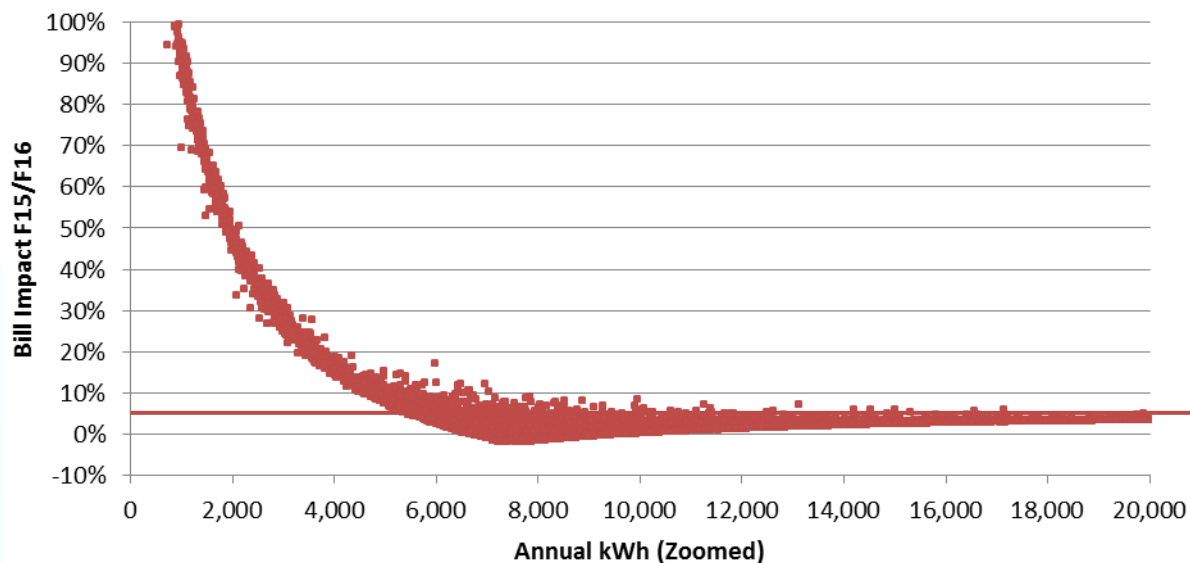
Bill Impact of customer segment
Color Bar: Middle 60%

BASIC = 100% FIXED / \$0 MINIMUM: BILL IMPACT DISTRIBUTIONS

Observations:

- Impacts typical users.
- High bill impacts to customers with low consumption

Bill Impact Distribution



Annual Consumption Range for the middle 60% of each customer segment

BASIC AND MINIMUM CHARGE IMPACTS

Annual Bill Difference from SQ, for the following median customers of each segment

	No Basic	SQ Basic				50% FC Basic			100% Basic
	\$0 Minimum	\$0 Min per month (SQ)	\$10 Min per month	\$15 Min per month	\$20 Min per month	\$0 Min per month	\$10 Min per month	\$15 Min per month	\$0 Minimum
All Customers	19.69	0.03	-0.78	-3.09	-8.53	-12.97	-13.05	-14.29	-45.42
Low Income	1.65	0.03	-0.62	-2.45	-6.76	-0.97	-1.04	-2.02	-3.43
Apartment	-21.35	0.02	-0.41	-1.64	-4.52	14.32	14.27	13.62	50.09
Electric Heat	18.78	0.02	-0.78	-3.07	-8.44	-12.37	-12.46	-13.68	-43.31

Negligible Bill Variance (about \$15/year max)

BASIC CHARGES

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> • Step 2 rate unchanged
Fairness	<ul style="list-style-type: none"> • Basic Charge increases improve alignment of charges with cost characteristics, causation • At 0% fixed cost recovery, all low consumers benefit • At 50% fixed cost recovery, some customers benefit; others, such as Apts. and very low consumers, do not • At 100% fixed cost recovery, high bill impacts to typical customers
Practicality	<ul style="list-style-type: none"> • No material change relative to SQ
Stability	<ul style="list-style-type: none"> • Increasing revenue collection through fixed charges will improve revenue stability, although the effect would be small

I. BC Hydro seeks input on increasing or decreasing the Basic Charge, and what additional analysis, if any, stakeholders recommend (with reasons).

MINIMUM CHARGES

Summary

Criteria	Comments
Economic Efficiency	<ul style="list-style-type: none"> Step 2 rate unchanged
Fairness	<ul style="list-style-type: none"> Increases % of fixed costs recovered through fixed charges Favourable bill impacts for most customers
Practicality	<ul style="list-style-type: none"> An additional charge will diminish simplicity and increase administrative complexity, all else equal
Stability	<ul style="list-style-type: none"> Increasing revenue collection through fixed charges will improve revenue stability, although the effect would be small

- J. BC Hydro seeks input on decoupling the Minimum Charge from the Basic Charge, including in relation to whether the Basic Charge should be changed.**
- K. BC Hydro proposes no further modeling is required in respect of 100% fixed cost recovery through a Basic Charge or in respect of eliminating all forms of fixed charges.**
- L. What additional analysis, if any, do stakeholders recommend (with reasons)?**

OTHER POTENTIAL RATE ISSUES

7. LRMC for RIB ratemaking – Capacity Value
8. Voluntary TOU Rates for Residential Customers
9. Lifeline Rates

SHOULD CAPACITY VALUE BE ADDED TO LRMC (ENERGY) FOR RATEMAKING PURPOSES?

Concept introduced in the 2013 RIB Re-pricing Proceeding

- The RIB rate should include a signal for avoided capacity costs:
 - Residential customers do not pay demand charges
 - Residential customers are not signaled the cost of sizing equipment to meet maximum demand
 - Energy savings deliver some associated capacity savings

Key Issues

- Demand charges reflect embedded costs, which signal the cost of reserving capacity
- Demand charges are not a de facto means of signaling the avoided cost of capacity
- The RIB is an energy conservation rate intended to signal the efficient use of energy
- A 'capacity value' in every hour is not a capacity signal
- The upper end of the LRMC (energy) range is used and the capacity value is within the range of energy price uncertainty

M. BC Hydro proposes that the LRMC for RIB rate-making not include a capacity value to be added to the LRMC (energy). What are stakeholders views on the concept?

VOLUNTARY TOU RATES FOR RESIDENTIAL CUSTOMERS

Criteria	Comments
Economic Efficiency	<p>Rates may be cost-based, but:</p> <ul style="list-style-type: none"> • Low to modest capacity savings: Small on-peak to off-peak differential under cost-based rates provides modest incentive and would likely result in low participation rates and low savings potential among participating customers with low on-peak share (“natural winners”, “free-riders”) • BC Hydro foresees no deferral value for resource planning purposes given uncertain delivery • No associated energy savings
Fairness	<ul style="list-style-type: none"> • Cost shifting from participating to non-participating customers • May improve flexibility to shift load and manage rate increases, but limited given expected participation mainly of natural winners and self-selecting customers • See Stability
Practicality	<ul style="list-style-type: none"> • Limited participation rates: Natural winners (low on-peak share) and self-selecting customers dominate • System costs and customer support costs, in addition to on-going marketing and operations support to backstop expected on-going turnover in customer participation • May conflict with simple RIB conservation message (which is, if you use more, you pay more)
Stability	<ul style="list-style-type: none"> • Revenue shortfall and subsidization: Participation of “natural winners” can result in a revenue shortfall that is collected from both participants and non-participants

N. BC Hydro seeks stakeholder feedback on the reasons why BC Hydro would pursue Voluntary TOU for Residential customers.

LIFELINE RATES

- BC Hydro outlined the legal / jurisdictional issues at the 8 May Workshop
- BC Hydro is of the view that sections 59-61 of the *Utilities Commission Act* do not allow the BCUC to reduce power rates based on the income level of customers
- Lifeline rates likely to be seen as unduly preferential to low income customers or unduly discriminatory to the remaining customers who would be subsidizing the lifeline rates
- Refer to the BC Hydro's 2008 RIB Argument and Reply for further discussion

NEXT STEPS

- There will be a 45-day written comment period from the posting of summary notes of this workshop on BC Hydro's 2015 RDA website
- After considering written comments, BC Hydro expects to host another Residential rates workshop in January 2015